

# Blended Approach: The Convergence of Resilience and Psychoeducation in Science Learning

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*Abstract .This paper introduces the "Proud Of Your Own" module (POYO), the Blended Module that combines the academic resilience constructs and the contents of the form four physics subjects contained in the Physics curriculum in Malaysia, the topic of Light and Vision. The purpose of the module development is to improve the academic achievement of the topic as well as the academic resiliency of the students involved through the psychoeducation approach. The POYO module focuses on the promotion and enhancement of academic resilience that can widen the inner strength of the students from four aspects which are social skills, social support, goal efficiencies and planning priority behaviours. The combination of the idea of Social Constructivism theory as proposed by Vygotsky (1978) and the Cultural-ecological transactional Theory by Bronfenbrenner (1979) has been adapted in line with the goal of creating a conducive environment for science learning and student personality development. This paper also discusses the formulation of psychoeducation approaches based on Behaviourism theory. The key elements in the theory are convincing in a psycho-educational approach that can help the subject teachers in and out of the classroom. The development of this module can be a catalyst for the other subjects and helps teachers to practice counselling skills in the classroom through psychoeducation approaches.*

*Keywords: Academic resilience, Psychoeducation.*

## Introduction

In a "normal" class, there are many individual differences among the learners. It is usually impossible for the teacher to simultaneously meet all the needs of each individual students, so Proud of Your Own (POYO) Module is sequenced in a variety of patterns to build a unique course of study for students with different interests and needs. This paper sets to look at one dimension change in the science curriculum which is the incorporation of the resilience aspect into the science subject. The resulting *Blended Module* that integrates psychological elements and the Physics curriculum through counselling approach which is a form of psychoeducation. In the field of education, psycho-educational interventions have been widely used and found that the effects demonstrate a positive and stimulating effect towards the development of psychology and academic achievement among students (Alvares, 2009; Corey et al., 2010, Mehmet and Zeynep, 2011; Aslina Ahmad, 2013). Psychoeducation turns out to provide therapeutic value in education where students are guided through information cognitive approach and behavioural strategies throughout the teaching and facilitating process in the classroom. Through psychological interventions internal psychological problems that often become the source of weakness in student's learning can be overcome and further realize the goals of education to be achieved. Based on the study by Aslina Ahmad (2013), found that through the methods

of providing, discussing and integrating information in the activities conducted using this module, the teacher is able to create a corresponding "counselling map" with the student (client) thereby creating a therapeutic environment where the use of skills of counselling principle applied throughout the PdPc process has proven to be effective in learning problem. In this context, all subject teachers act as counselling throughout the science learning process.

According to Corey et al. (2010), psychoeducation is found to be effective in enhancing individual internal development so that positive effects can be applied in their lives. These impacts will also increase student's resilience in achieving maximum levels to enhance their academic achievement and personality. There is a juxtaposition of views between resilience and students academic achievement in science subject. This raises a few pertinent questions - What is the role of resilience towards student's academic achievement in science subject? Are teachers or others well-versed with the knowledge and method on how to increase academic resilience among students? The situation above depicts a state that needs immediate attention regarding to academic resilience to continue the momentum of promising achievements in science learning.

An analytical look at the concept of academic resilience which is often associated with a positive self potential for students, constantly striving to widen inner strength and develop all intrinsic or extrinsic abilities.

According to Shahabudin (2016), these strength can minimize failures and help them to become proactive and challenging in overcoming all difficult situations and challenges. Based on that statement, teachers should identify factors that promote healthy development and learning among students to face the difficulties in which resilient characteristics are applied throughout the learning process in science to make them better and more competent than before. Furthermore, Shahabuddin, Noor Shafrin and Haslinda (2014) clarify that students with academic resilience should be able to go through a process of adjustment or improvement that involves themselves with their learning environment. If seen from certain angle, resilience is not an end product or fixed state but a process. The process enables one to develop survival ability to face emotional, social and physical challenges. Sound in all respects, resilience can be categorized into several parts (a) the process of human development (Bernard, 1991), (b) the developmental capacity with respect to individual differences in responding to risk factors (Rutter, 1995) and (c) the outcome as a quick recovery from an experienced risk factor (Hanewald, 2011). All in all, resilience means “bouncing back” from difficult experiences.

### Literature Review

#### Theoretical Framework

This POYO module is combined result of the theory of Social Constructivism and Cultural-ecological Transactional Theory and also using Behaviourism theory approach. An effective academic resilience programme is usually predicated on a sound theoretical framework that serves to infuse the principles and methods to be adopted by the programme. Within the context of environmental factors that socially assigned value of education, were determinants of the context in which student live. This should be interpreted as, the role of schools, classrooms, teachers, parents and peers about attainment and ultimately educational achievement itself.

Vygotsky's theory of learning (1978) is in the flow of constructivism, but the scheme has a line of connectivity with the flow of social approaches and cognitive flows (Sri Wulandari, 2015). Constructivism is an approach that gives learners the right and how to learn by constructing high meanings and understandings in their respective frameworks based on the experience and environment available (Noor Izzati, 2012). According to Vygotsky (1978), social interaction is important to help and support learning to improve high-level thinking. During science learning, *scaffolding* techniques as example are performed to guide and support students according to the needs of the students themselves. In general, for educational perspectives, *Scaffolding* is the help or support provided by teachers in the form of assistance or guidance, procedures by adults or friends who are more knowledgeable in mastering the field or knowledge. Santrock (2007), says that when a student learns new skills or difficult skills in science, the teacher needs to give full guidance but once the student has

started to understand, the guidance given should be reduced so that students can master the skills. Using *Scaffolding* methods, conversations and interactions are the most important tools to enable students to develop new concepts more systematically (Atifah Ruzana, 2017). According to Vygotsky (1978) human cognitive function comes from each other's social interactions where knowledge and understanding are constructed when a person is socially involved in dialogue with other individuals (inter-psychological) and then constructed in their own individual (intra-psychological). Lev Vygotsky (1978) believes that cognitive development is influenced by environmental, social and cultural factors that known as *Sociocultural*.

The Cultural-ecological transactional perspective was developed as a response to criticism of the ecological-transactional Theory developed by Bronfenbrenner (1979) whereas cultural factors contributed to student's development. The ecological-transactional model emphasizes the influence of multiple systems on human development at individual, micro-, meso-, exo- and macro-system levels. These system accommodate individual characteristics to broader cultural beliefs and values, such as the socially attributed value of education (macro system). This theory states that there are many levels of environmental influences that can affect the development of students, ranging from families and others.

Behaviourism theory holds that learning is a process of conditioning, the relationship between external stimuli and individual responses can be built to produce consistent behavioural change. For present purpose we will define learning as a relatively permanent change in behaviour traceable to experience and practice. Behavioural figures such as Pavlov (1849-1939), Thondike (1898) and Skinner (1938) argue that learning is a behaviour that can be observed, controlled and predicted. Therefor some activities in the POYO module involve skills as well as knowledge and intention. Repetition of these activities, or practice, leads to an improvement and skill. This module also encourage maximum participation of the student when they engage in physical activity such as design an experiment or do some hands on activities. Skinner's approach to the problem of motivation is almost completely external to the learner. All complex responses by students are the result of simple responses being built up into more complicated behaviour patterns. Any set of conditions that promote the reoccurrence of the response is said to be a reinforcement. Carefully programmed instructional contingencies is arranged for this module to produce desired behaviour for students.

#### Advantage of the Proposed Academic Resilience

Essentially, the strength of this programme come from the effort to inject elements of academic resilience into the learning process of science that enables students adapt to the environment, gain family support and emphasize the social interaction skills among peers

expected to have an impact on the rise of scientific literacy level.

Showing concern for others in distress, share something with others, takes turn without fuss, complies with request without protest, helps others and gives something to others are examples of prosocial behaviours. With regard to relation between prosocial behaviour and academic resilience has shown that interaction with their peers encourage students to actively participate in the process of learning science. Students have a set of personality characteristics, nature, and beliefs that promote their academic success in learning science regardless of their backgrounds or current circumstances. The social transformational aspect of learning science is intrinsically embedded in its informal framework that encourages the transactional exchange of ideas across class, racial and cultural divides. In addition, prosocial behaviour in learning science is essentially a self-actualizing process for it constitutes a personal empowering tool as its theoretical paradigm allows for the flowering of a diversity of personal opinions, critical responses and the fostering of ideational creativity. In other words, with this social transformational aspects, academic resilience is no longer constrained by academically achievement but rather through an evolving personal interaction with peers, conceptualized and refine responses that both critically insightful and perceptive.

Finally, academic resilience generally support positive or desirable development across individual student to resist all the difficulties in learning and neutralize negative outcomes. Briefly, academic resilience focused on developing critical literacy skills such as analytical thoughts, innovative insights and perceptive observations through constructive and critical exchanges.

### **Implementation Framework**

Capacity for positive emotional expression of a student as studied by resilience researchers (Bonanno, 2004; Fredrickson, et al., 2003; Tugade and Fredrickson, 2004; Tugade et al., 2004; Zautra, et al. 2005) formed from one of the important components of social skills as embodied in the Goleman-Norcia Emotional Intelligence Model (2005). Its structure and thematic content is customized by emphasizing leadership skills, decision making, communication and social skills aspects and last but not least, conflict management. The findings by Meor Ibrahim and Nurul Amira, (2010) shows that most teachers opinion that if students have social skills and work in a team, the various problems in the learning process can be overcome rather than individually and the students become more mature and excel in their academic performance. Meanwhile, for social support aspects, it's directly related to the level of self-esteem of students.

Students with low resilient levels usually get less social support and are often affected by emotional changes such as feelings of low self-esteem, quietness, irritability and low motivation. Good quality social support relationships will have positive implications for

academic achievement (Rozali, 2003) as a result of self-esteem received from various parties such as parents, teachers and friends.

Moreover, both intrinsic and extrinsic motivational roles to achieve goal efficacy that really importance and effectiveness in developing academic resilience among students. In perspective of intrinsic motivational, abilities and skills represent the inner strength largely innate such as physical and mental strength, temperament and emotional stability, intellect and appearance. While extrinsic motivational with regard to the network factors, roles to people in the social group become achieve models for positive behaviour and contribute to the individual's development of interests and skills.

Behavioural factors in arranging priorities are an essential element in producing excellent students in academic achievement. Without effective planning, optimal results can not be achieved in producing a balanced student in fact of physically, emotionally and intellectually.

### **Future Plans**

Students is highly dependant on incentives whether tangible or intangible. Thorndike (1898) in highlighting the intrinsic value of motivation noted that one of the key elements in fostering group motivation is through the provision of tangible rewards that serve to create a sense of ownership and nature a feeling of empowerment as well heightened self-worth. In cognizance of this important aspect, token reward, praise, accumulated points and other paraphernalia are given to groups that highlight excellence to generate the initial motivation for participation.

Teacher also can intervene and sit together but the form of the intervention is important. Teachers who were most successful in increasing the group work whether in formal setting of classroom or in informal setting and encourage them to learning together. The teacher's role should include preparing an appropriate and conducive classroom environment for optimal prosocial learning opportunities and providing a comprehensive curriculum of science that enhances the development of prosocial skills.

In addition to the above, intervention that combines academic resilience with the science curriculum can be used as a guide for students and teachers in making more positive changes and developments. The POYO module focuses on the promotion and enhancement of academic resilience that can widen the inner strength of the students from four aspects which are social skills, social support, goal efficiencies and planning priority behaviours to develop a permanent infatuation through a variety of innovative that are facilitative in nature.

### **Conclusion**

In conclusion, this paper has opened up thinking about its importance of convergence of resilience and psychoeducation to improving science achievement among students and increasing their academic resilience.

It is useful for students to adapt well in new challenges whether in academic world or everyday challenge.

Our challenge is to contribute to knowledge (*CTK*) as the results of this study are generalized and can be applied to other subjects using the same concept to realize the achievement of science learning. The active and participatory approach that academic resilience adopts will facilitate the exchange of viewpoints, promote empathy with other people and cultures, foster activities that call for critical inquiry, and encourage wider social participation.

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