

VOLUME 28 ISSUE 1

The International Journal of

# Pedagogy and Curriculum

---

## The 3Es Model

A Coaching Model for Enhancing Secondary Student Potential in Thailand

MARUT PATPHOL



THELEARNER.COM

## THE INTERNATIONAL JOURNAL OF PEDAGOGY AND CURRICULUM

<https://thelearner.com>  
ISSN: 2327-7963 (Print)  
ISSN: 2327-9133 (Online)  
<https://doi.org/10.18848/2327-7963/CGP> (Journal)

First published by Common Ground Research Networks in 2021  
University of Illinois Research Park  
60 Hazelwood Drive  
Champaign, IL 61820 USA  
Ph: +1-217-328-0405  
<https://cgnetworks.org>

*The International Journal of Pedagogy and Curriculum* is a peer-reviewed, scholarly journal.

### COPYRIGHT

© 2021 (individual papers), the author(s)  
© 2021 (selection and editorial matter),  
Common Ground Research Networks

All rights reserved. Apart from fair dealing for the purposes of study, research, criticism, or review, as permitted under the applicable copyright legislation, no part of this work may be reproduced by any process without written permission from the publisher. For permissions and other inquiries, please contact [cgnetworks.org](https://cgnetworks.org).



Common Ground Research Networks, a member of Crossref

### EDITOR

Bill Cope, University of Illinois at Urbana-Champaign, USA  
Mary Kalantzis, University of Illinois at Urbana-Champaign, USA

### ACTING DIRECTOR OF PUBLISHING

Jeremy Boehme, Common Ground Research Networks, USA

### EDITORIAL ASSISTANT

Kortney Sutherland, Common Ground Research Networks, USA

### ADVISORY BOARD

The Advisory Board of The Learner Research Network recognizes the contribution of many in the evolution of the Research Network. The principal role of the Advisory Board has been, and is, to drive the overall intellectual direction of the Research Network. A full list of members can be found at <https://thelearner.com/about/advisory-board>.

### PEER REVIEW

Articles published in *The International Journal of Pedagogy and Curriculum* are peer reviewed using a two-way anonymous peer review model. Reviewers are active participants of The Learner Research Network or a thematically related Research Network. The publisher, editors, reviewers, and authors all agree upon the following standards of expected ethical behavior, which are based on the Committee on Publication Ethics (COPE) Core Practices. More information can be found at <https://cgnetworks.org/journals/publication-ethics>.

### ARTICLE SUBMISSION

*The International Journal of Pedagogy and Curriculum* publishes biannually (June, December). To find out more about the submission process, please visit <https://thelearner.com/journals/call-for-papers>.

### ABSTRACTING AND INDEXING

For a full list of databases in which this journal is indexed, please visit <https://thelearner.com/journals/collection>.

### RESEARCH NETWORK MEMBERSHIP

Authors in *The International Journal of Pedagogy and Curriculum* are members of The Learner Research Network or a thematically related Research Network. Members receive access to journal content. To find out more, visit <https://thelearner.com/about/become-a-member>.

### SUBSCRIPTIONS

*The International Journal of Pedagogy and Curriculum* is available in electronic and print formats. Subscribe to gain access to content from the current year and the entire backlist. Contact us at [cgnetworks.org/cg\\_support](https://cgnetworks.org/cg_support).

### ORDERING

Single articles and issues are available from the journal bookstore at <https://cgnetworks.org/bookstore>.

### OPEN RESEARCH

*The International Journal of Pedagogy and Curriculum* is Hybrid Open Access, meaning authors can choose to make their articles open access. This allows their work to reach an even wider audience, broadening the dissemination of their research. To find out more, please visit <https://cgnetworks.org/journals/open-research>.

### DISCLAIMER

The authors, editors, and publisher will not accept any legal responsibility for any errors or omissions that may have been made in this publication. The publisher makes no warranty, express or implied, with respect to the material contained herein.

# The 3Es Model: A Coaching Model for Enhancing Secondary Student Potential in Thailand

Marut Patphol,<sup>1</sup> Srinakharinwirot University, Thailand

*Abstract: Coaching is an interesting topic in teaching and learning used to develop learners. Coaching helps develop student potential by focusing on the aspect of self-learning. In this study, the author developed a coaching model based on the philosophy of progressivism and the constructivism learning theory. Semantic analysis and a text clustering technique were applied to generate a model. The model was implemented using the AB experimental design with secondary school students. The sample group was comprised of forty secondary school students in the Suphanburi province, Thailand. The results show a coaching model named the 3Es. The 3Es model comprises three components—engage, empower, and enliven—with twenty coaching roles. After implementing the 3Es model, it was found that the students' potential increased before, during, and after the implementation of the model.*

*Keywords: Coaching Model, Instructional Coaching, Learners' Potential, Secondary Students*

## Introduction

The development of digital technology has a major impact on routine jobs. By 2030, it is expected that many companies will have transformed their business models by integrating technology into routine work (OECD 2018b; Oxford Economics 2019). Robotics and artificial intelligence will replace most routine tasks (World Economic Forum 2016), and technology will impact teaching approaches and transform learning (Office of Educational Technology 2016).

By 2022, most companies will have an average of nine role types managed by machines instead of humans, such as information and data processing; looking for and receiving job-related information; performing complex and technical activities; identifying and evaluating job-relevant information; performing physical and manual work activities; completing administration tasks; communicating and interacting; coordinating, developing, managing, and advising; and reasoning and decision making (World Economic Forum 2018). In addition, many companies will embrace learning and creativity as a core skill (Economist 2017; World Economic Forum 2018).

To prepare students for the future, teachers need to develop their students' potential. This encompasses social skills, personal skills, literacy, numeracy, critical thinking, problem solving, digital literacy, leadership, teamwork, entrepreneurship, emotional intelligence, communication, and collaboration skills, as well as enhancing their curiosity, initiative, persistence/grit, adaptability, and social and cultural awareness (OECD 2018a, 2018b; Redecker and Punie 2013; Economist 2015; World Economic Forum 2015; Jones and Doolittle 2017). In addition, students should be encouraged to improve their cognitive and learning skills because both form the foundation of creative innovation (Abdulla 2017; Costa and Garmston 2015; Fogarty, Kerns, and Pete 2018; Markham 2016; Fogarty 2016; Delaney 2017).

However, it is necessary to have effective methods for developing student potential that are appropriate with student nature because of varying learning styles (Office of Educational Technology 2016; OECD 2017). Students can learn almost anything using digital technology adapted to their learning style (i.e., self-learning and e-learning; Pearson Cooperation 2017). Furthermore, they can develop their analytical thinking, critical thinking, systematic thinking, problem solving, and creative thinking by participating in activities of interest (Erickson,

<sup>1</sup> Corresponding Author: Marut Patphol, 114 Sukhumvit 23, Bangkok 10110, Thailand/ 4E-95-09-4F-E3-41, Graduate School, Srinakharinwirot University, Bangkok, 10110, Thailand. email: rutmarut@gmail.com

Lanning, and French 2017; Gill and Thomson 2017). Therefore, effective teaching techniques for students should be suited to their interests because it allows them to learn more effectively (OECD 2018a, 2018b; Fau and Moreau 2018).

For students who have several learning styles, teachers can take on the role of a coach. Coaching encourages students' performances (Downey 2003). In addition, coaching is the development of a person's potential using a variety of methods to help the mentee with continuous development (Cox, Bachkirova, and Clutterbuck 2014). A major aspect of coaching is that it encourages mentees to learn independently (Whitmore 2009). Also, coaching is central to prepare students for success (Sweeney 2013). Teachers' roles within coaching can be used to reveal the motto "sage on the stage guide on the side;" this motto moves toward coaching today (Whitmore 2009; Sweeney 2013; Cox, Bachkirova, and Clutterbuck 2014; Costa and Garmston 2015).

Coaching aims to encourage students' thinking skills, learning processes, and self-reliance (van Nieuwerburgh 2017). However, previous academics have categorized many types of coaching, such as instructional coaching, literacy coaching, cognitive coaching, classroom management coaching, content coaching, differentiated coaching, and leadership coaching (Knight 2009b). In this study, coaching will be defined as developing students' potential by focusing on self-learning.

Several important aspects comprise coaching, which is used with students to improve their commitment to learning, perseverance, resilience, self-efficacy, and growing performance. Because coaching is a flexible method for students' development, it focuses on prompting the students to learn by themselves (Sweeney 2013; Abdulla 2017).

The principle of coaching is to develop people in an informal but focused method with intellectual guidance, knowledge sharing, and reflection (Abdulla 2017). Many researchers have found that coaching can develop and increase student potential (Bettinger and Baker 2014; Palsma 2018). However, there are several characteristics of coaching that can be problematic for teachers in a classroom environment, such as difficulties with the following:

- gaining students' trust (Fogarty, Kerns, and Pete 2018; Harris, Jones, and Huffman 2018; Knight 2018)
- respecting students' dignity (Abdulla 2017; Patphol 2018; Sweeney and Mausbach 2018)
- supporting students (Hildrew 2018; Knight 2018; McCrudden and McNamara 2018)
- encouraging students to be active learners (Ng 2018; Smith and Firth 2018; Truax 2018; Holtey-Weber 2018)
- encouraging students to set learning goals (Abdulla 2017; Fogarty, Kerns, and Pete 2018)
- promoting students' self-discipline (Erickson, Lanning, and French 2017; Abdulla 2017; Bergin 2018)
- encouraging learners to apply a variety of learning processes (Crockett and Churches 2017; Gill and Thomson 2017; Abdulla 2017; Hildrew 2018; McCrudden and McNamara 2018; Smith and Firth 2018)

In this study, the author synthesized coaching characteristics from many resources into practical guidelines for teachers in the classroom.

In the context of K-12 (5- to 6-year-old children through twelfth grade for 17- to 18-year-old teenagers), coaching is a form of professional development that supports teaching practices and promotes continuous improvement; it also focuses on goals generated from the needs of teachers and their students (Killion 2012). Instructional coaching is a dedicated partner for teachers, providing evidence-based practices that improve teaching and learning, so students can be more successful through improved teacher effectiveness (Hanover Research 2014; Guest Blogger 2018). Coaching in the K-12 context is related to four aspects, namely: (1) learning design effectively, (2) encouraging improvement through formative assessment, (3) empowering students using feedback for responsible actions, and (4) inspiring through passion and a belief in the talent of the student (Fogarty 2016).

Researchers have developed several instructional coaching models, such as the COACH model (Clarity of the task, Ownership of the task, Attention to others, Comprehensive of the content, Heightened or hidden emotions; Stix and Hrbek 2006). The instructional coaching of Knight (2009a) includes equality, choice, voice, dialogue, reflection, praxis, and reciprocity. There are also four levels of the coaching practice development model of CfBT Education Trust (Lofthouse, Leat, and Towler 2010), the new Brunswick's coaching model of New Brunswick Department of Education and Early Childhood Development (2013), the Campbell's (2016) GROWTH model, and the GROW model (Goal, Reality, Options, Will; Abdulla 2017). Also, common elements from the effective coaching practice model of Morgan and Rochford (2017) should be taken into consideration. The six "P" model comprises the principles of coaching from Gallagher and Bennett (2018) and the cycle of instructional coaching model of Identify, Learn, and Improve (Knight 2019).

Although there have been several research studies on various coaching models, the findings of these studies have focused on how coaching models can improve the teachers' potential or professional development, but it is unclear what the conclusions are on the coaching models of the teachers (teacher as coach) in the K-12 context, specifically regarding how to enhance student potential in the digital technology era. This research developed a coaching model—the 3Es (Engage, Empower, Enliven)—to enhance student potential.

## Research Objectives

This research was conducted in order to develop a coaching model to enhance learners' potential with the following objectives:

1. Develop a coaching model for enhancing secondary student potential
2. Implement the model for three months and compare the students' potential before, during, and after implementing the coaching model

## Conceptual Framework

This research is based on progressivism philosophy and constructivism learning theory. Progressivism philosophy assumes that education should focus on the whole child and encourage them to be a learner through learning by doing (Dewey 1934). Constructivism learning theory, which was influenced by Dewey, Montessori, Piaget, Vygotsky, Bruner, and Simon, focuses on the learner thinking about learning, and there is no knowledge independent of the meaning attributed to experience (constructed) by the learner or a community of learners (Hein 1991).

The principles of the constructivism learning theory include:

1. learning is an active process
2. students can learn by themselves through active participation
3. students construct their own knowledge
4. learning involves language
5. learning is a social activity
6. learning is contextual
7. one needs knowledge to learn
8. learning takes time
9. motivation is a key component in learning (Hein 1991)

According to progressivism philosophy and constructivism learning theory, teaching or coaching roles should aim to encourage students to learn by themselves (Costa and Garmston 2015; Abdulla 2017). For example, when asking questions, students are prompted to use their own learning processes. There are several coaching tasks that teachers can apply in the

classroom, such as encouraging thinking, asking questions, providing feedback (van Nieuwerburgh 2017), supporting students to achieve success (Sweeney and Mausbach 2018), prompting students to become self-determined, expanding their awareness, optimizing their decision-making, improving overall management skills (Abdulla 2017), encouraging empowerment with formative assessment, and providing inspiration (Fogarty and Pete 2017).

Consequently, students who are subject to continuous coaching will be able to learn by themselves. The major repercussions of coaching are that the students are able to identify their own learning objectives and learning strategies, design their own learning processes to achieve success, discover knowledge by themselves, use a variety of learning processes, share ideas, meet goals, become self-reliant to learn and practice, self-reflect on their own learning, and self-improve (Dweck 2012; Blackburn 2016; Gregory and Kaufeldt 2015; Marz and Hertz 2015; Keene 2018; Ng 2018). The students' abilities mentioned above are expected to be developed through a coaching model in this study, namely the 3Es (Engage, Empower, Enliven). The conceptual framework of this research is indicated in Figure 1 below.

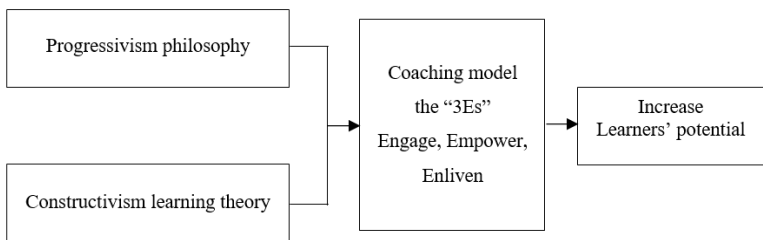


Figure 1: Research Conceptual Framework  
Source: Patphol

In Figure 1, the progressivism philosophy and constructivism theory were applied to create a coaching model. The researcher applied the idea of learning by doing as part of progressivism philosophy and the idea that students can construct their knowledge and understanding as part of constructivism theory to create a coaching model to enhance student potential.

Student potential in this study consisted of ten characteristics that the researcher studied and measured using a holistic scoring rubric:

1. identify their own learning objectives
2. identify their own learning strategies
3. design their own learning processes
4. discover knowledge by themselves
5. apply a variety of learning processes
6. share their own ideas with others
7. put effort and self-discipline into their goal
8. commit to learn and maintain self-reliance
9. reflect upon improving their independent learning
10. improve learning processes by themselves.

## Research Methodology and Results

The research methodology in this study consisted of two phases according to both of the research objectives. The first phase was to develop a coaching model, and the second phase was to compare the students' potential before, during, and after the implementation of the coaching model for three months.

The first phase consisted of four steps. The first step was a literature review, the second step was generating the model, the third step was validating the model by expertise, and the

fourth step was confirming the model by observing the teachers who were acting as a coach. The details of each of these steps are as follows.

### ***First Step: Literature Review***

The literature review was proceeded by searching textbooks and articles related to coaching by using keywords and phrases such as “instructional coaching,” “coaching for learning,” “coaching for students’ achievement,” “coaching for students’ potential,” and “K-12 coaching.” After that, the quality of each resource was evaluated using three criteria: (1) relevance to the development of secondary students, (2) all information appears for reference before reading and making notes on the different coaching roles, and (3) has been referred to by other scholars or researchers. The literature review found that there were 212 textbooks and 91 articles published between 2000 to 2018 that passed the quality evaluation indicated (see Table 1).

Table 1: Resources of Literature Review

<i>Year</i>	<i>Textbooks</i>	<i>Articles</i>	<i>Total</i>
2000	5	2	7
2001	5	0	5
2002	6	1	7
2003	3	5	8
2004	5	0	5
2005	9	4	13
2006	8	4	12
2007	2	4	6
2008	6	4	10
2009	11	2	13
2010	5	3	8
2011	13	1	14
2012	15	11	26
2013	6	5	11
2014	18	7	25
2015	17	5	22
2016	30	9	39
2017	24	9	33
2018	24	15	39
Total			303

Source: Patphol

### ***Second Step: Literature Synthesizing and Creating the 3Es Model***

The researcher applied semantic analysis and text clustering techniques to generate the model. The first part of this step was analyzing the concept of coaching, which was carried out by examining keywords in the sentences. The second part of this step was synthesizing the components of the coaching model and coaching roles that operated by clustering the concepts of coaching and then design a coaching model.

In regard to the semantic analysis above, the review of related literature on coaching found that the characteristics focused on encouraging students to be able to learn by themselves through stimulating intrinsic motivation (Fogarty, Kerns, and Pete 2018; Harris, Jones, and Huffman 2018; Knight 2018), respecting students’ human dignity (Abdulla 2017; Patphol 2018; Sweeney and Mausbach 2018), and supporting students (Hildrew 2018; Knight 2018; McCrudden and McNamara 2018).

In addition, relevant factors were found that affected the students’ potential through coaching, including their ability to:

1. identify their own learning objectives
2. identify their own learning strategies
3. design their own learning processes
4. discover knowledge by themselves
5. apply a variety of learning processes
6. share their ideas with others
7. put effort and self-discipline into their goal
8. commit to learn and maintain self-reliance
9. reflect upon improving their independent learning
10. improve learning processes by themselves

Consequently, the author used all of these factors for evaluating the effectiveness of the 3Es model in the implementation stage.

Finally, a coaching model following the documentary synthesizing was generated. It was found that the appropriate coaching model for developing student potential should be based on the belief that every student can learn by themselves through practice and reflective thinking about their own experiences, which was subsequently named the 3Es model.

### ***Third Step: Face Validity Checking for the 3Es Model***

After the second step, the model was validated by the face validity technique. Fifteen Thai experts who were professors in Thailand universities in the field of coaching verified the model using a rating scale from five to one (highest = 5 points, high = 4 points, neutral = 3 moderate, low = 2 points, lowest = 1 point). The questionnaire requested the opinions of experts concerning the twenty coaching roles following each component of the 3Es model. The data were analyzed by calculating the mean and standard deviation. The validated results of the 3Es model found that each of the components, coaching roles, and overall results fell into the highest level of validity (mean = 4.91, SD= 0.28), meaning that the model was accurate and possible to implement.

### ***Fourth Step: Concurrent Validity Checking of the 3Es Model***

After the validation of the 3Es model by the experts, the author validated it again according to the known group technique by observing two teachers who have coaching potential and were selected by purposive selection according to the criteria. The first criterion was that the teachers must have continuous results of student development, and the second was that the teachers attended coaching training previously. The data were gathered through observation of the teachers in the seventh-grade classroom every week for one semester. There were sixteen weeks, equaling 100 percent of expression. The instrument was an observation form on the list of twenty coaching roles according to the 3Es model. In addition, for each week, if the teachers expressed a behavior relevant to the coaching roles, then the author provided a frequency score of = 1; therefore, the maximum frequency of each coaching role was = 16. The acceptance criteria for the coaching roles had to be above 80 percent. From the results of the concurrent validation of the 3Es model by known group technique, it was found that all coaching roles met the acceptance criteria.

### ***Fifth Step: Final Iteration of the 3Es Model***

The fifth step was adjusting the 3Es model according to the first research objective. The author created the 3Es model based on a theoretical background, the results of expert examination, and the results of teacher observation in the classroom. The 3Es model consisted of three elements, including Engage, Empower, and Enliven.

The 3Es model possesses interrelated components. Each of the components, Engage, Empower, and Enliven, are related to one another. However, each component can enhance the learner's potential in a specific manner. The engage component focuses on attracting and



holding the learner's attention. The empower component focuses on encouraging the learner to learn by themselves. The enliven component focuses on creating an active learning atmosphere. Continuous coaching is the major factor of success. Teachers coach rather than teach or provide knowledge to the learners. The 3Es model is outlined in Figure 2 below.

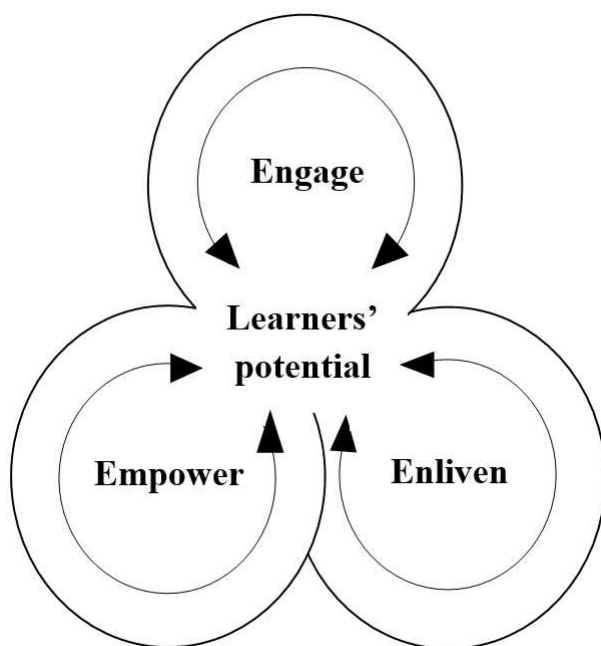


Figure 2: The 3Es Model  
Source: Patphol

As mentioned in Figure 2, the three elements comprising the 3Es model intersect. This means that the Engage, Empower, and Enliven elements all have to work together for effective coaching following this model. The arrows in the model indicate that the Engage, Empower, and Enliven elements are able to rotate, referring to that the different focus of coaching roles that the teachers exhibit in the classroom according to differing coaching situations, such as the student's learning style, ability, or others students' needs. Finally, the goals of coaching using the 3Es model are seen to relate to the learner's potential, as mention in the second step.

The coaching roles relating to the Engage component are indicated by Figure 3 as follows.

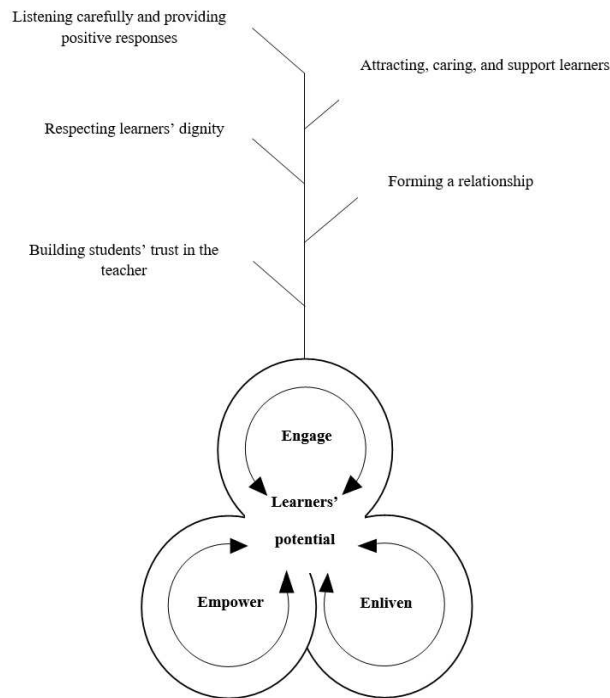


Figure 3: The Coaching Roles in Engage  
Source: Patphol

The coaching roles relating to the Empower component are indicated by Figure 4 as follows.

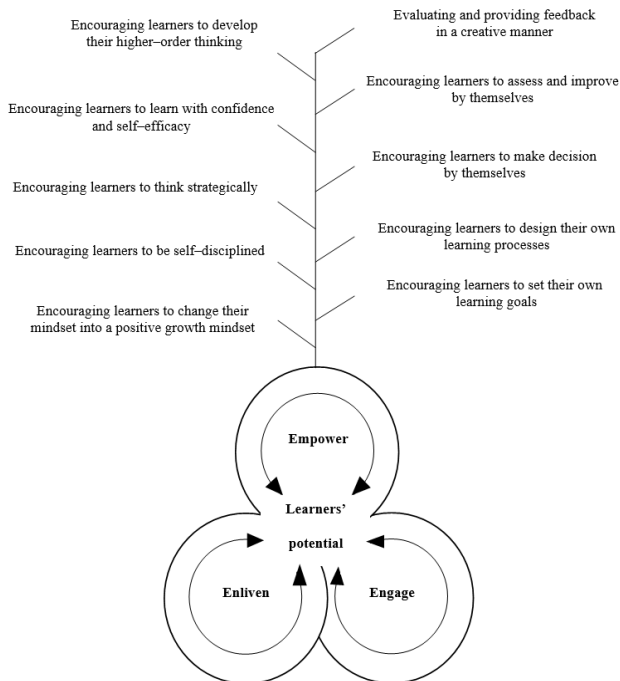


Figure 4: The Coaching Roles in Empower  
Source: Patphol

The coaching roles relating to the Enliven component are indicated by Figure 5 as follows.

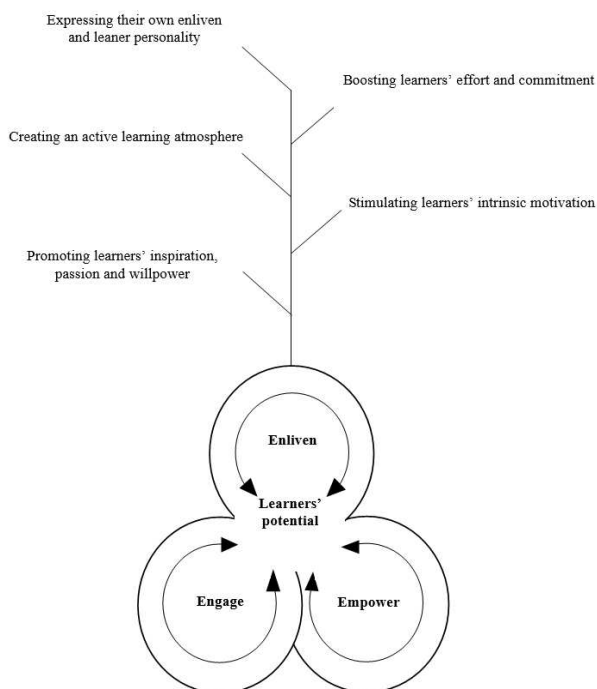


Figure 5: The Coaching Roles in Enliven  
Source: Patphol

### ***Sixth Step: Implementing the 3Es Model***

According to the second research objective, after expert validation of the 3Es model, the author implemented the 3Es model for three months with forty students that were enrolled in a secondary school in Suphanburi, Thailand. The one-group time-series design was used to implement the model, and volunteer sampling was used to select the students. In the end, the subject group comprised of 14-year-old students who had moderate learning skills, especially regarding their self-learning and higher-order thinking, as reported by their teacher.

To implement the 3Es model, the author invited a teacher to use the model with the forty students. After the invitation, a female science teacher with eight years of teaching experience volunteered. The author prepared her by training the coaching skills according to the 3Es model. After that, training activities were designed and implemented for a period of eighteen hours in total. The training activities consisted of two hours explaining the 3Es model and sixteen hours of coaching practice according to the coaching roles following the 3Es. The evaluation of the readiness of the science teacher using the 3Es model was conducted by observing the coaching skills with the coaching roles in the 3Es model. The teacher was observed to evaluate if they had high-level coaching skills according to the holistic scoring rubric.

A holistic scoring rubric of coaching skills according to the coaching roles following the 3Es was developed. It consisted of five levels of coaching skills (lowest = 1, low = 2, moderate = 3, high = 4, highest = 5), and each level had a definition for evaluation. The reliability was 0.89 by  $\alpha$ -coefficient, and the readiness criteria were scored as high to very high. Finally, the evaluation result found that the science teacher had coaching skills within the high level (mean = 4.45), which met the readiness criteria previously set forth.

For the implementation of the 3Es model, a science teacher was selected as the model user, and the author was designated the role of data collector. The author collected the data by observing the

students' potential on three occasions—before, during, and after implementation of the model. The students' potential was measured and based on the ten behaviors mentioned previously.

A holistic scoring rubric was used to evaluate student potential. It was comprised of five levels (lowest = 1, low = 2, moderate = 3, high = 4, highest = 5), and each level carried a definition for evaluation with a reliability = 0.92 by  $\alpha$ -coefficient. Data analysis was proceeded by mean and standard deviation calculation according to the period of data gathering. Interpretation criteria were 1.00–1.49 (lowest), 1.50–2.49 (low), 2.50–3.49 (moderate), 3.50–4.49 (high), and 4.50–5.00 (highest). The results of model implementation showed that student potential increased over time, and this was also compared to the student's potential using the Friedman test, which showed a statistical significance. The details of such are indicated in Table 2 and 3 as follows.

Table 2: Results of Implementing the 3Es Model (Maximum Score = 5)

Student Potential	Period of Evaluating the Students' Potential								
	Before Implementation of the 3Es Model			During Implementation of the 3Es model			Two weeks after Implementation of the 3Es model		
	Mean	s	Interpretation	Mean	s	Interpretation	Mean	s	Interpretation
1. Identify their own learning objectives	2.40	0.50	low	3.03	0.80	moderate	3.53	0.51	high
2. Identify their own learning strategies	2.63	0.59	moderate	3.05	0.60	moderate	3.55	0.50	high
3. Design their own learning processes	2.65	0.48	moderate	3.13	0.72	moderate	3.60	0.50	high
4. Discover knowledge by themselves	2.70	0.46	moderate	3.15	0.62	moderate	3.48	0.51	moderate
5. Apply a variety of learning processes	2.93	0.27	moderate	3.15	0.43	moderate	3.53	0.51	high
6. Share their ideas with others	2.28	0.55	low	3.25	0.49	moderate	3.53	0.51	high
7. Put effort and self-discipline into their goal	2.20	0.41	low	3.03	0.80	moderate	3.58	0.50	high
8. Commit to learn and maintain self-reliance	2.68	0.47	moderate	3.18	0.68	moderate	3.58	0.50	high
9. Reflect upon improving their independent learning	2.38	0.54	low	3.05	0.68	moderate	3.58	0.50	high
10. Improve learning processes by themselves	2.25	0.44	low	3.13	0.52	moderate	3.53	0.55	high
Overall	2.51	0.53	moderate	3.11	0.64	moderate	3.55	0.50	high

Source: Patphol

Table 3: Results of Comparing the Learners' Potential

Period of Evaluating the Students' Potential	Mean Rank	n	df	Chi-Square	P-value One-tail Test
Before implementing the 3Es model	1.01	40	2	68.35	.01
During implementing the 3Es model	2.18				
After implementing the 3Es model	2.81				

Source: Patphol

## Discussion

This research supported the development of a coaching model—the 3Es model—for enhancing student potential. This model included three components and twenty coaching roles. After implementing the model, the study proved that all learning behaviors were increased. These findings indicate that the use of the 3Es model enhanced student potential because it encouraged students to use their abilities for learning through engagement, empowerment, and enlivenment behaviors.

Using the 3Es model increased students' potential. This finding was relevant to previous research regarding how the application of the coaching behaviors affected students' achievement in various topics, such as students' reading achievement (Elish-Piper and L'Allier 2010; Davis et al. 2018); students' learning skills (Hrastinski et al. 2012; Theeboom, Beersma, and Van Vianen 2015); students' mathematics achievement (Palsma 2018); students' academic achievement (Albalawi 2018; Kraft, Blazar, and Hogan 2018; Lee et al. 2018; Bettinger and Baker 2014; Capstick 2018); students' real-time expression of scientific knowledge in the classroom, reasoning, and higher-order complexity (van Vondel et al. 2017); students' growth (Frazier 2018); support for the learning process (Godskesen and Kobayashi 2015); students' development of emotional resilience (Eccles and Renaud 2018), and finally, self-confidence, thinking skills, and resourcefulness (Lech, van Nieuwerburgh, and Jalloul 2018; Boyatzis and Jack 2018).

In addition, all of the twenty coaching roles affected the learners' behaviors according to reasoning and academics' support of the following. In regards to the first coaching role, building students' trust in the teacher—with trust being the foundation that leads to successful coaching (Gregory and Kaufeldt 2015; Fogarty 2016; Gill and Thomson 2017; Knight 2018)—it was identified that students' trust was the foundation of coaching. The second coaching role, forming a relationship, refers to a positive interaction between the teacher and learners. In addition, this relationship supports effective learning (Campbell 2016; Duckworth 2016; Bergin 2018). The third coaching role, respecting learners' dignity, requires particular attention to be given to students. Respectful behaviors also support the self-esteem and self-worth of students (Cain et al. 2016; Gill and Thomson 2017; Yeh 2017; Patphol 2018). The fourth coaching role involves caring for and supporting learners, which supports learners' achievement (Abdulla 2017; Fogarty, Kerns, and Pete 2018; Smith and Firth 2018). Listening carefully and providing positive responses—the fifth coaching role—is considered very important to support the learners to do activities effectively, particularly listening carefully (Abdulla 2017; Antonetti and Stice 2018; Hildrew 2018; Knight 2018). In regards to the sixth coaching role is encouraging learners to change their mindset into a positive growth mindset; in other words, this refers to the growth mindset, which is the cause of self and a posture that embraces progress as well as success (Dweck 2012; Smith and Firth 2018; Truax 2018; Holtey-Weber 2018). The seventh coaching role, encouraging learners to set their own learning goals, is considered important because having a sense of one's own learning is necessary as this leads to self-reliance and self-learning. Setting their own learning goals supports the learner's inner motivation and self-discipline (Abdulla 2017; Knight 2018; McGuire and McGuire 2018). The eighth coaching role I to encourage learners to be self-disciplined, whereby self-discipline is the cause of success in learning because learners with self-discipline will have their own targets and be able to control their own learning behavior (Gill and Thomson 2017; Abdulla 2017; Bergin 2018; Knight 2018). The ninth coaching role, which is encouraging learners to design their own learning processes, supports the learners up to the point where they can learn most things by themselves (Abdulla 2017; McCrudden and McNamara 2018; Smith and Firth 2018). The tenth coaching role—encouraging learners to think strategically—supports the learner in becoming able to solve problems or create innovations themselves (Costa and Garmston 2015; Hildrew 2018; Smith and Firth 2018). Importantly, the eleventh coaching role, encouraging learners to make decisions by themselves, leads to students' self-sufficiency in learning (Fogarty, Kerns, and

Pete 2018; Harris, Jones, and Huffman 2018; Knight 2018). The twelfth coaching role, encouraging learners to learn with confidence and self-efficacy, is the basic need of learning that promotes learning (Yeh 2017; Abdulla 2017; Boyatzis and Jack 2018). The thirteenth coaching role encourages learners to assess and improve by themselves; self-assessment and self-improvement are important for lifelong learning and growth continuously (Abdulla 2017; Harris, Jones, and Huffman 2018; Knight 2018). For the fourteenth coaching role, which encourages learners to develop their higher-order thinking, students can practice and learn higher-order thinking through the “power questions” technique (Costa and Garmston 2015; Poliner and Benson 2017; Abdulla 2017). The fifteenth coaching role—evaluating and providing feedback in a creative manner—allows teachers to design learning activities that lead to learners’ achievement, evaluate the learners based on authentic assessments, and provide feedback that is relevant to the concepts to encourage learners’ achievement (Abdulla 2017; Fogarty, Kerns, and Pete 2018; Hildrew 2018). Promoting learners’ inspiration, passion, and willpower—the sixteenth coaching role—supports learners’ participation in learning activities (Fogarty, Kerns, and Pete 2018; Maiers and Sandvold 2018). The seventeenth coaching role, stimulating learners’ intrinsic motivation, is necessary for learning something new and complex (Gill and Thomson 2017; Abdulla 2017; Antonetti and Stice 2018). For the eighteenth coaching role, it is important to create an active learning atmosphere because it supports the learners’ thinking and allows for a positive space to practice their skills continuously (Costa and Garmston 2015; Gill and Thomson 2017; Knight 2018). The nineteenth coaching role, boosting learners’ effort and commitment, supports the learners as it encourages them to try to learn by themselves in order to achieve their learning goals (Gill and Thomson 2017; Antonetti and Stice 2018; Hildrew 2018). Finally, the twentieth coaching role, expressing their own enlivened learner personality, is a coaching role that supports desirable learning behaviors of the learners because the learners will view the teacher’s behavior, and thus, they will tend to act similarly (Gregory and Kaufeldt 2015; Cain et al. 2016; Boyatzis and Jack 2018).

In addition, the 3Es model was significant in enhancing student potential because it was developed to meet the nature and needs of students as much as possible. Furthermore, the model focused on stimulating students’ inner motivations and passions to learn. Additionally, coaching behaviors under each of the coaching roles according to the Engage, Empower, and Enliven elements were factors of significance.

For the Engage component, the significant coaching behaviors within each of the coaching roles that promoted the 3Es model effective are as follows. To build students’ trust in the teacher, teachers need to attempt the following coaching behaviors, consisting of telling the truth, following through on promises, behaving politely, gently, and consistently, and behaving with emotional stability. These behaviors supported students’ self-confidence, according to Clarke (2013), Gregory and Kaufeldt (2015), Campbell (2016), Fogarty (2016), Gill and Thomson (2017), and Knight (2018). It is also important to encourage the formation of positive relationships, which includes coaching behaviors such as greeting, talking creatively, listening carefully, thanking and apologizing, and accepting different views. These behaviors supported the relationship between students and teacher, according to Brookhart (2006), Brower and Keller (2006), Tomlinson (2001), Ellison and Hayes (2009), Hattie (2009), Duckor (2014), Erickson and Lanning (2014), Costa and Garmston (2015), Campbell (2016), Duckworth (2016), Erickson, Lanning, and French (2017), Gill and Thomson (2017), Yeh (2017), Bergin (2018), and Knight (2018). For respecting learner’s dignity, coaching behaviors consisted of honoring the learners and providing justice, equality, benefits, and opportunities to think and decide to the students. These behaviors promoted students’ self-efficacy, according to Hare (1992), Whitmore (2009), Gregory and Kaufeldt (2015), Cain et al. (2016), Gill and Thomson (2017), and Yeh (2017). To engage, care for, and support learners, coaching behaviors consisted of providing challenging yet appropriate activities that follow individual differences, monitoring the students’ processes, nurturing the students’ feelings, and supporting the students to learn by

themselves. These behaviors enhanced students' self-efficacy, according to Clarke (2013), Dove, Honigsfeld, and Cohan (2014), Middleton and Perks (2014), Sanzo, Myran, and Caggiano (2014), Blackburn (2016), Ginsberg (2015), Gregory and Kaufeldt (2015), Fogarty (2016), Breault and Breault (2016), Hazel (2016), Markham (2016), Gill and Thomson (2017), Abdulla (2017), Fogarty, Kerns, and Pete (2018), and Smith and Firth (2018). For listening carefully and providing positive responses, coaching behaviors consisted of the teacher being at peace of mind (i.e., calm), paying attention to the students, detecting the students' intentions from their body language, listening to the students with empathy and understanding, and behaving gently with calm responses. These behaviors promoted students to more responsive to learning, according to Ellison and Hayes (2009), Clarke (2013), Abdulla (2017), Antonetti and Stice (2018), Hildrew (2018), Knight (2018), and van Nieuwerburgh (2017).

The Empower component consisted of several significant coaching behaviors within each of the coaching roles; these behaviors are as follows. To encourage learners to change their mindset into a positive growth mindset, teachers could benefit from the following coaching behaviors: stimulating the students' perception of the notion that everyone can learn, prompting the students to put effort into learning, prompting the students to share ideas with others and reflect on their success, and providing feedback that focuses on learning processes. These behaviors promoted students' positive thinking, according to Clarke (2013), Gregory and Kaufeldt (2015), Marz and Hertz (2015), Brock and Hundley (2016), Fogarty (2016), Goldberg (2016), Hildrew (2018), and Smith and Firth (2018). In order to encourage learners to set their own learning goals, coaching behaviors consisted of asking the students what they want to learn and achieve, promoting the students' interest in learning, providing opportunities for sharing their own learning goals with others, and motivating the students to reflect upon their own learning goals. These behaviors encouraged student learning goals, according to Bloomberg and Pitchford (2017), Elickson, Lanning, and French (2017), Gill and Thomson (2017), van Nieuwerburgh (2017), Abdulla (2017), Knight (2018), and McGuire and McGuire (2018). For teachers to encourage learners to be self-disciplined, coaching behaviors consisted of prompting the students to create their own study plans, monitoring the learning progressions of the students, showing appreciation self-discipline actions when the students are behaving well, sharing teachers' experiences of self-discipline with students, and providing opportunities for reflection on self-discipline. These behaviors encouraged self-directed learning skills of students, according to Elickson, Lanning, and French (2017), Gill and Thomson (2017), Abdulla (2017), Bergin (2018), and Knight (2018). To encourage learners to design their own learning processes, coaching behaviors that teachers could implement consisted of providing opportunities to do so, prompting the students to share their own learning process with others, monitoring the learning processes of the students, prompting the students to reflect upon their own learning processes, and providing feedback to the students for improving their learning processes. These behaviors promoted learning process skills of students according to Gill and Thomson (2017), van Nieuwerburgh (2017), Abdulla (2017), McCrudden and McNamara (2018), and Smith and Firth (2018). For the encouragement of learners to think strategically, coaching behaviors consisted of asking the students "What do you think?" and "What makes you think so?" which stimulates students to think systematically; promoting the students to create things suitable to their ability; suggesting that the students share their own thinking strategies with others; and recommending the students to reflect upon their own thinking strategies. These behaviors enhanced students' thinking skills, according to Costa and Garmston (2015), Boyle and Charles (2016), Cain et al. (2016), Fogarty (2016), Collins (2017), Elickson, Lanning, and French (2017), Gill and Thomson (2017), van Nieuwerburgh (2017), Antonetti and Stice (2018), Boyatzis and Jack (2018), Hildrew (2018), and Smith and Firth (2018). To encourage learners to make decisions by themselves, coaching behaviors consisted of asking the students, "How do you decide?" providing opportunities and information for the students to make decisions by themselves, and prompting the students to describe and reflect on their decision-making processes. These behaviors promoted students' decision-making skills, according to Costa and Garmston (2015), Abdulla (2017), Antonetti and Stice (2018), Fogarty,

Kerns, and Pete 2018, and Hildrew (2018). For teachers to encourage learners to learn with confidence and self-efficacy, coaching behaviors consisted of prompting the students to mentally review their own successful experiences and current capacity to compare with the past. In addition, these behaviors included providing success stories relevant to the students' need and several pathways to success relevant to the students' ability, along with prompting the students to reflect upon their own self-efficacy behavior. These behaviors supported students' self-reliance, according to Blackburn (2016), Fogarty (2016), Renninger and Hidi (2016), Bloomberg and Pitchford (2017), Yeh (2017), Abdulla (2017), and Boyatzis and Jack (2018). To encourage learners to assess and improve by themselves, coaching behaviors that teachers could implement consisted of using open-ended questions, asking questions relevant to the learners' ability, providing complex activities for the learners that are relevant to the concepts of learning, appreciating the learners after they tried and then reinforcing them, and providing useful feedback to the learners for them to improve their thinking processes. These behaviors supported students' self-evaluation and self-development, according to Costa and Garmston (2015), Abdulla (2017), Antonetti and Stice (2018), Fogarty, Kerns, and Pete (2018), and Hildrew (2018). For encouraging learners to develop their higher-order thinking, coaching behaviors consisted of prompting the students to assess their learning processes and progress, leading them to identify how to improve their work and themselves. In addition, this causes the students to assess their products and identify the strengths and weaknesses and teaches them to monitor themselves to continuously improve their learning process by themselves. These behaviors promoted students' thinking skills, according to Bloomberg and Pitchford (2017), van Nieuwerburgh (2017), York-Barr et al. (2017), Abdulla (2017), Harris, Jones, and Huffman (2018), and Knight (2018). To evaluate and provide feedback in a creative manner, teachers should try the following coaching behaviors: providing useful feedback to the students through several methods, based on the information, and continuously in order for students to learn how to improve and honor their learning processes. These behaviors supported students' self-improvement skills, according to Blackburn (2016), Crockett and Churches (2017), Delaney (2017), Gill and Thomson (2017), van Nieuwerburgh (2017), Abdulla (2017), Fogarty, Kerns, and Pete (2018), and Hildrew (2018).

For the Enliven component, the significant coaching behaviors within each of the coaching roles that promoted the 3Es model effective are as follows. To prompt learners' inspiration, passion, and willpower, coaching behaviors that teachers could implement consist of boosting the students' tendency to think positively and their self-esteem, prompting the students' to think creatively and review their life goals, and encouraging the students to share their passion and willpower with others. These behaviors supported students' curiosity, according to Delaney (2017), van Nieuwerburgh (2017), Boyatzis and Jack (2018), Fogarty, Kerns, and Pete (2018), and Maier and Sandvold (2018). For teachers to stimulate learners' intrinsic motivation, coaching behaviors consisted of informing the students about the benefits of learning, prompting the students to reflect upon their own intrinsic motivators, and encouraging the students to share their own intrinsic motivation with others. In addition, it is beneficial if teachers share their intrinsic motivation with the students. These behaviors encouraged students' learning motivation, according to Ginsberg (2015), Gregory and Kaufeldt (2015), Fogarty (2016), Gill and Thomson (2017), Abdulla (2017), and Antonetti and Stice (2018). To creating an active learning atmosphere, teachers were encouraged to abide by the following coaching behaviors: friendly and smiling, providing comfortable feelings to the students, motivating the students rather than commanding them, providing opportunities for the students to think and be creative on their own, and highlighting the students' strengths. These behaviors stimulated students' creativity, according to Gill and Thomson (2017), Antonetti and Stice (2018), Boyatzis and Jack (2018), Hildrew (2018), Knight (2018), and McGuire and McGuire (2018). For boosting learners' effort and commitment, coaching behaviors consisted of guiding the students to understand that an important factor in gaining success is effort and to show them their progress after they put effort into learning, along with providing suitable activities for students' capacity and interests, showing appreciation and reinforcing the students' efforts, and



letting the learners reflect upon their own effort. These behaviors promoted students to continuously learning, according to Fogarty (2016), Gill and Thomson (2017), and Abdulla (2017). To express an enliven and leaner personality, teachers need to allow for the following coaching behaviors: sharing ideas toward current issues, sharing current knowledge, linking the concepts of learning with the current issues together, integrating students' interests with learning activities, and providing several learning activities through active learning. These behaviors encouraged students to develop characteristics of learner personalities, according to Gregory and Kaufeldt (2015), Cain et al. (2016), and Boyatzis and Jack (2018). As mentioned above, coaching behaviors promoted students to learn continuously.

## Conclusion

The 3Es model provided knowledge from past coaching model research. The major conclusion gained was that effective coaching should be operated in a cycle process through the coaching roles in Engage, Empower, and Enliven. In addition, each of the coaching roles were interrelated, allowing for flexibility in the students' development and appropriate classroom application.

## Recommendations

### *Recommendations for Applications*

Teachers can appropriately apply the coaching roles in all secondary learning situations. In some situations, the teacher may provide only one component of the 3Es; however, in others, they must combine two or three components. In addition, the teacher should coach the learners as individuals during the time in which they perform activities. This type of coaching will allow the students to develop their skills and learning potentials.

While coaching, teachers should consider the nature of the concepts and the learner, the learning styles and abilities of each learner, the cultural context, and each learner's differing emotions. The individual differences of students, as mentioned above, are important factors to consider in regards to effective coaching. Adaption of these factors would help the material to be more in line with the nature of the learners and improve integrated development.

### *Recommendations for Future Research*

It is recommended that the 3Es model is extended into several education settings to study the effects of the model on the secondary students' potential according to the ten behaviors from this research. In addition, this model should be applied to several more classrooms at a secondary education level because this study only captured a small sample size. Finally, the 3Es model should be applied to develop the students' potential in creative and innovative skills because these are becoming crucial in the twenty-first century.

## Limitations

This research was limited to a small sample size for implementation of the 3Es model. This impacts the power of generalization in other educational contexts. In addition, the 3Es model was created for Thailand's educational culture; therefore, the model may not be suitable for use in other countries.

## Acknowledgement

I would like to thank the Graduate School of Srinakharinwirot University, Thailand, for providing research funding to the researcher that brought about the 3Es model, and the College of Education, Illinois State University, USA, for providing academic resources that brought about the success of this research.

## REFERENCES

- Abdulla, Adam. 2017. *Coaching Students in Secondary Schools: Closing the Gap between Performance and Potential*. New York: Routledge.
- Albalawi, Abdullah Suliman. 2018. "The Effect of Using Flipped Classroom in Teaching Calculus on Student's Achievement at University of Tabuk." *International Journal of Research in Education and Science* 4 (1): 198–207. <https://www.ijres.net/index.php/ijres/article/view/187>.
- Antonetti, John, and Terri Stice. 2018. *Powerful Task Design: Rigorous and Engaging Tasks to Level Up Instruction*. Thousand Oaks, CA: Corwin.
- Bergin, Christi. 2018. *Designing a Prosocial Classroom: Fostering Collaboration in Students from Pre-K-12 with the Curriculum You Already Use*. New York: W. W. Norton & Company.
- Bettinger, Eric P., and Rachel B. Baker. 2014. "The Effects of Student Coaching: An Evaluation of a Randomized Experiment in Student Advising." *Educational Evaluation and Policy Analysis* 36 (1): 3–19. <https://doi.org/10.3102/0162373713500523>.
- Blackburn, Barbara R. 2016. *Motivating Struggling Learners: 10 Ways to Build Student Success*. New York: Routledge.
- Bloomberg, Paul J., and Barb Pitchford. 2017. *Leading Impact Teams: Building a Culture of Efficacy*. Thousand Oaks, CA: Corwin.
- Boyatzis, Richard E., and Anthony I. Jack. 2018. "The Neuroscience of Coaching." *Consulting Psychology Journal: Practice and Research* 70 (1): 11–27. <https://doi.org/10.1037/cpb0000095>.
- Boyle, Bill, and Marie Charles. 2016. *Curriculum Development*. Thousand Oaks, CA: SAGE Publications.
- Breault, Donna Adair, and Rick Breault, eds. 2016. *The Power of an Ideal. Experiencing Dewey: Insight for Today's Classroom*. New York: Kappa Delta Pi.
- Brock, Annie, and Heather Hundley. 2016. *The Growth Mindset Coach: A Teacher's Month-by-Month Handbook for Empowering Students to Achieve*. Berkeley, CA: Ulysses Press.
- Brookhart, Susan M. 2006. *Formative Assessment Strategies for Every Classroom: An ASCD Action Tool*. Alexandria, VA: ASCD.
- Brower, Robert, and Amy Keller. 2006. *Empower Students: Seven Strategies for a Smart Start in School and Life*. Oxford, UK: Rowman & Littlefield Education.
- Cain, Renate Nummela, Geoffrey Cain, Carol McClintic, and Karl J. Klimek. 2016. *12 Brain/Mind Learning Principles in Action: Teach for the Development of Higher-Order Thinking and Executive Function*, 3rd ed. Thousand Oaks, CA: Corwin.
- Campbell, John Y. 2016. "Framework for Practitioners 2: The GROWTH Model." In *Coaching in Professional Contexts*, edited by C. van Nieuwerburgh, 235–239. London: SAGE Publications Limited.
- Capstick, Madeline Kyle. 2018. "Exploring the Effectiveness of Academic Coaching for Academically At-Risk Colleges Students," Ph.d. diss. University of Memphis.
- Clarke, John H. 2013. *Personalized Learning: Student-Designed Pathways to High School Graduation*. Thousand Oaks, CA: Corwin.
- Collins, Allan. 2017. *What's Worth Teaching?: Rethinking Curriculum in the Age of Technology*. New York: Teachers College Press.
- Costa, Arthur L., and Robert J. Garmston. 2015. *Cognitive Coaching: Developing Self-Directed Leaders and Learners*, 3rd ed. Lanham, MD: Rowman & Littlefield.
- Cox, Elaine, Tatiana Bachkirova, and David Clutterbuck, eds. 2014. *The Complete Handbook of Coaching*, 2nd ed. London: SAGE Publications Limited.
- Crockett, Lee Watanabe, and Andrew Churches. 2017. *Mindful Assessment: The 6 Essential Fluencies of Innovative Learning*. Bloomington, IN: Solution Tree Press.

- Davis, Marcia H., James M. McPartland, Charlene Pryseski, and Elizabeth Kim. 2018. "The Effects of Coaching on English Teachers' Reading Instruction Practices and Adolescent Students' Reading Comprehension." *Literacy Research and Instruction* 57 (3): 255–275. <https://doi.org/10.1080/19388071.2018.1453897>.
- Delaney, Sean. 2017. *Become the Primary Teacher Everyone Wants to Have: A Guide to Career Success*. New York: Routledge.
- Dewey, John. 1934. *The Art of Experience*. New York: Capricorn Books.
- Dove, Maria G., Andrea Honigsfeld, and Audrey Cohan. 2014. *Beyond Core Expectations: A Schoolwide Framework for Serving the Not-So-Common Learner*. Thousand Oaks, CA: Corwin.
- Downey, Myles. 2003. *Effective Coaching: Lessons from the Coach's Coach*, 2nd ed. London: Texere Publishing.
- Duckor, Brent. 2014. "Formative Assessment in Seven Good Moves." *Educational Leadership* 71 (6): 28–32. <https://www.greatschoolspartnership.org/wp-content/uploads/2016/11/Formative-Assessment-in-Seven-Good-Moves.pdf>.
- Duckworth, Sylvia. 2016. *Sketchnotes for Educators: 100 Inspiring Illustrations for Lifelong Learners*. Irvine, CA: EdTechTeam Press.
- Dweck, Carol S. 2012. *Mindset: How You Can Fulfill Your Potential*. London: Robinson Publishing.
- Eccles, Sue, and Vianna Renaud. 2018. "Building Students' Emotional Resilience through Placement Coaching and Mentoring." In *Enhancing Employability in Higher Education through Work Based Learning*, edited by Dawn A. Morley, 153–172. London: Palgrave Macmillan.
- Economist. 2015. *Driving the Skills Agenda: Preparing Students for the Future*. New York: Economist Intelligence Unit.
- . 2017. "Special Report Lifelong Education: Learning and Learning." [https://www.economist.com/sites/default/files/learning\\_and\\_earning.pdf](https://www.economist.com/sites/default/files/learning_and_earning.pdf).
- Elish-Piper, Laurie, and Susan K. L'Allier. 2010. "Exploring the Relationship between Literacy Coaching and Student Reading Achievement in Grades K–1." *Literacy Research and Instruction* 49 (2): 162–174. <https://doi.org/10.1080/19388070902913289>.
- Ellison, Jane L., and Carolee Hayes. 2009. *Cognitive Coaching: Weaving Threads of Learning and Change into the Culture of an Organization*. Norwood, MA: Christopher-Gordon.
- Erickson, Lynn H., and Lois A. Lanning. 2014. *Transitioning to Concept-Based Curriculum and Instruction: How to Bring Content and Process Together*. Thousand Oaks, CA: Corwin.
- Erickson, Lynn H., Lois A. Lanning, and Rachel French. 2017. *Concept-Based Curriculum and Instruction for the Thinking Classroom*, 2nd ed. Thousand Oaks, CA: Corwin.
- Fau, Simon and Yasmeen Moreau. 2018. "Managing Tomorrow's Digital Skills: What Conclusions Can We Draw from International Comparative Indicators?" *UNESDOC Digital Library*. <https://unesdoc.unesco.org/ark:/48223/pf0000261853>.
- Fogarty, Robin J. 2016. *Invite Excite Ignite: 13 Principles for Teaching, Learning, and Leading, K-12*. New York: Teachers College Press.
- Fogarty, Robin J., and Brian Pete. 2017. *From Staff Room to Classroom: A Guide for Planning and Coaching Professional Development*, 2nd ed. Thousand Oaks, CA: Corwin.
- Fogarty, Robin J., Gene M. Kerns, and Brian M. Pete. 2018. *Unlock Student Talent: The New Science of Developing Expertise*. New York: Teachers Collage Press.
- Frazier, Rebecca A. 2018. "The Impact of Instructional Coaching on Teacher Competency, Job Satisfaction, and Student Growth," PhD diss., University of Colorado Springs.
- Gallagher, Tiffany L., and Sheila M. Bennett. 2018. "The Six 'P' Model: Principles of Coaching for Inclusion Coaches." *International Journal of Mentoring and Coaching in Education* 7 (1): 1–16. <https://doi.org/10.1108/ijmce-03-2017-0018>.
- Gill, Scherto, and Garrett Thomson. 2017. *Human-Centred Education: A Practical Handbook and Guide*. New York: Routledge.

- Ginsberg, Margery B. 2015. *Excited to Learn: Motivation and Culturally Responsive Teaching*. Thousand Oaks, CA: Corwin.
- Godskesen, Mirjam, and Sofie Kobayashi. 2015. "Coaching Doctoral Students—A Means to Enhance Progress and Support Self-Organization in Doctoral Education." *Studies in Continuing Education* 38 (2): 145–161. <https://doi.org/10.1080/0158037X.2015.1055464>.
- Goldberg, Gravity. 2016. *Mindset & Moves: Strategies that Help Readers Take Charge*. Thousand Oaks, CA: Corwin.
- Gregory, Gayle, and Martha Kaufeldt. 2015. *The Motivated Brain: Improving Student Attention, Engagement, and Perseverance*. Alexandria, VA: ASCD.
- Guest Blogger. 2018. "Seven Qualities of an Instructional Coach." *ASCD (Association for Supervision and Curriculum Development)*. <https://inservice.ascd.org/seven-qualities-of-an-instructional-coach/>.
- Hanover Research. 2014. *Instructional Coaching Models in the K-12 Context*. Washington, DC: District Administration Practice.
- Hare, William. 1992. "Humility as a Virtue in Teaching." *Journal of Philosophy of Education* 26 (2): 227–236. <https://doi.org/10.1111/j.1467-9752.1992.tb00283.x>.
- Harris, Alma, Michelle Jones, and Jane B. Huffman, eds. 2018. *Teachers Leading Educational Reform: The Power of Professional Learning Communities*. New York: Routledge.
- Hattie, John. 2009. *Visible Learning*. New York: Routledge Academic.
- Hazel, Cynthia E. 2016. *Empowered Learning in Secondary Schools: Promoting Positive Youth Development through a Multitier System of Supports*. Washington, DC: American Psychological Association. <https://doi.org/10.1037/14896-000>.
- Hein, George E. 1991. "Constructivist Learning Theory." Paper presented at *CECA (International Committee of Museum Educators) Conference*, Jerusalem, IL, October 12–22, 1991. <https://www.exploratorium.edu/education/ifi/constructivist-learning>.
- Hildrew, Chris. 2018. *Becoming a Growth Mindset School: The Power of Mindset to Transform Teaching, Leadership and Learning*. New York: Routledge.
- Holtey-Weber, Jorim. 2018. *Growth Mindset Interventions: Lessons from across Domains*. Groningen, NL: University of Groningen.
- Hrastinski, Stefan, Anneli Edman, Fredrik Andersson, Tanvir Kawnine, and Carol-Ann Soames. 2012. "Informal Math Coaching by Instant Messaging: Two Case Studies of How University Students Coach K-12 Students." *Interactive Learning Environments* 22 (1): 84–96. <https://doi.org/10.1080/10494820.2011.641682>.
- Jones, Stephanie M., and Emily J. Doolittle. 2017. "Social and Emotional Learning." *Future of Children* 27 (1): 3–11. <https://www.jstor.org/stable/44219018?seq=1>.
- Keene, Ellin Oliver. 2018. *Engaging Children: Igniting A Drive for Deeper Learning K–8*. Portsmouth, NH: Heinemann.
- Killion, Joellen. 2012. "Coaching in the K-12 context." In *SAGE Handbook of Mentoring and Coaching in Education*, edited by Sarah J. Fletcher and Carol A. Mullen, 273–294. Thousand Oaks, CA: SAGE Publications.
- Knight, Jim. 2009a. "The Big Four: A Simple and Powerful Framework to Dramatically Improve Instruction." *Strategram* 21 (4): 1–7. <https://karaleess.eq.edu.au/Supportandresources/Formsanddocuments/Documents/the-big-four-by-jim-knight.pdf>.
- . ed. 2009b. *Coaching Approaches & Perspectives*. Thousand Oaks, CA: Corwin.
- . 2018. *The Impact Cycle: What Instructional Coaches Should Do to Foster Powerful Improvements in Teaching*. Thousand Oaks, CA: Corwin.
- . 2019. "Instructional Coaching for Implementing Visible Learning: A Model for Translating Research into Practice." *Education Sciences* 9 (2): 1–16. <https://doi.org/10.3390/educsci9020101>.

- Kraft, Mathew A., David Blazar, and Dylan Hogan. 2018. "The Effect of Teacher Coaching on Instruction and Achievement: A Meta-Analysis of the Causal Evidence." *Review of Educational Research* 88 (4): 547–588. <https://doi.org/10.3102/0034654318759268>.
- Lech, Agnieszka M., Christian van Nieuwerburgh, and Sirine Jalloul. 2018. "Understanding the Experience of PhD Students Who Received Coaching: An Interpretative Phenomenological Analysis." *Coaching: An International Journal of Theory, Research and Practice* 11 (1): 60–73. <https://doi.org/10.1080/17521882.2017.1381753>.
- Lee, Soon Chun, Gwen Nugent, Gina M. Kunz, James Houston, and SueEllen DeChenne-Peters. 2018. "Case Study: Value-Added Benefit of Distance-Based Instructional Coaching on Science Teachers' Inquiry Instruction in Rural Schools." *Journal of Science Teacher Education* 29 (3): 179–199. <https://doi.org/10.1080/1046560X.2018.1432226>.
- Lofthouse, Rachel, David Leat, and Carl Towler. 2010. *Coaching for Teaching and Learning: A Practical Guide for Schools*. Berkshire, UK: CfBT Education Trust.
- Maiers, Angela, and Amy Sandvold. 2018. *The Passion-Driven Classroom: A Framework for Teaching and Learning*, 2nd ed. New York: Routledge.
- Markham, Thom. 2016. *Redefining Smart Awakening Student's Power to Reimagine Their World*. Thousand Oaks, CA: Corwin.
- Marz, Kristine, and Christine Hertz. 2015. *A Mindset for Learning: Teaching the Traits of Joyful, Independent Growth*. Portsmouth, NH: Heinemann.
- McCrudden, Mathew T., and Danielle S. McNamara. 2018. *Cognition in Education*. New York: Routledge.
- McGuire, Sandra Yancy, and Stephanie McGuire, S. 2018. *Teach Yourself How to Learn: Strategies You Can Use to Ace Any Course at Any Level*. Sterling, VA: Stylus Publishing.
- Middleton, Michael, and Kevin Perks. 2014. *Motivation to Learn: Transforming Classroom Culture to Support Student Achievement*. Thousand Oaks, CA: Corwin.
- Morgan, Mark, and Sarah Rochford. 2017. *Coaching and Mentoring for Frontline Practitioners*. Dublin: Centre for Effective Services.
- New Brunswick Department of Education and Early Childhood Development. 2013. *Education Support Services Team: Instructional Coaching Model*. Fredericton, CA: New Nouveau Brunswick.
- Ng, Betsy. 2018. "The Neuroscience of Growth Mindset and Intrinsic Motivation." *Brain Science* 8 (2): 20. <https://doi.org/10.3390/brainsci8020020>.
- OECD (Organisation for Economic Co-operation and Development). 2017. *Future of Work and Skills*. [https://www.oecd.org/els/emp/wcms\\_556984.pdf](https://www.oecd.org/els/emp/wcms_556984.pdf).
- . 2018a. *PISA: Preparing Our Youth for an Inclusive and Sustainable World the OECD PISA Global Competency Framework*. <https://www.oecd.org/education/Global-competency-for-an-inclusive-world.pdf>.
- . 2018b. *The Future of Education and Skills Education 2030*. [https://www.oecd.org/education/2030/E2030%20Position%20Paper%20\(05.04.2018\).pdf](https://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf).
- Office of Educational Technology. 2016. *Future Ready Learning: Reimagining the Role of Technology in Education*. Washington, DC: US Department of Education.
- Oxford Economics. 2019. *How Robots Change the World: What Automation Really Means for Jobs and Productivity*. <https://www.oxfordeconomics.com/recent-releases/how-robots-change-the-world>.
- Palsma, Darci. 2018. "The Effects of a Coaching Cycle on Student Achievement in Math." Master's thesis, Northwestern College.
- Patphol, Marut. 2018. "Coaching Model for Enhancing Learning Skills and Self-Development Characteristics of Graduate Students." *Veridian E-Journal, Silpakorn University* 11 (4): 140–157. <https://he02.tci-thaijo.org/index.php/Veridian-E-Journal/article/view/115616>.
- Pearson Cooperation. 2017. *The Future of Learning: Pearson Annual Report and Accounts*. New York: Pearson.

- Poliner, Rachel A., and Jeffrey Benson. 2017. *Teaching the Whole Teen: Everyday Practices That Promote Success and Resilience in School and Life*. Thousand Oaks, CA: Corwin.
- Redecker Christine, and Yves Punie. 2013. "The Future of Learning 2025: Developing a Vision for Change." *Future Learning* 2 (1): 3–17. <https://doi.org/10.7564/13-FULE12>.
- Renninger, Ann K., and Suzanne E. Hidi. 2016. *The Power of Interest for Motivation and Engagement*. New York: Routledge.
- Sanzo, Karen L., Steve Myran, and John Caggiano. 2014. *Formative Assessment Leadership*. New York: Routledge.
- Smith, Marc, and Jonathan Firth. 2018. *Psychology in the Classroom: A Teacher's Guide to What Works*. Oxford, UK: Routledge.
- Stix, Andi, and Frank Hrbek. 2006. *Teachers as Classroom Coaches: How to Motivate Students across the Content Areas*. Alexandria, VA: ASCD.
- Sweeney, Diane. 2013. *Student Centered-Coaching at the Secondary Level*. Thousand Oaks, CA: Corwin.
- Sweeney, Diane, and Ann Therese Mausbach. 2018. *Leading Student-Centered Coaching: Building Principal and Coach Partnership*. Thousand Oaks, CA: Corwin.
- Theeboom, Tim, Bianca Beersma, and Annelies E. M. Van Vianen. 2015. "The Differential Effects of Solution-Focused Coaching Questions on the Affect, Attentional Control and Cognitive Flexible of Undergraduate Students Experiencing Study-Related Stress." *Journal of Positive Psychology* 11 (5): 460–469. <https://doi.org/10.1080/17439760.2015.1117126>.
- Tomlinson, Carol Ann. 2001. *How to Differentiate Instruction in Mixed-Ability Classrooms*, 2nd ed. Alexandria, VA: ASCD.
- Truax, Megan L. 2018. "The Impact of Teacher Language and Growth Mindset Feedback on Writing Motivation." *Literacy Research and Instruction* 57 (2): 135–157. <https://doi.org/10.1080/19388071.2017.1340529>.
- van Nieuwerburgh, Christian. 2017. *An Introduction to Coaching Skills: A Practical Guide*, 2nd ed. Thousand Oaks, CA: SAGE Publications.
- van Vondel, Sabine, Henderien Steenbeek, Marijn van Dijk, and Paul van Geert. 2017. "The Effects of Video Feedback Coaching for Teachers on Scientific Knowledge of Primary Students." *Research in Science Education* 48:301–324. <https://doi.org/10.1007/s11165-016-9569-z>.
- Whitmore, John. 2009. *Coaching for Performance: GROWing Human Potential and Purpose: The Principles and Practice of Coaching and Leadership*, 4th ed. London: Nicholas Brealey.
- World Economic Forum. 2015. *New Vision for Education: Unlocking the Potential of Technology*. [http://www3.weforum.org/docs/WEFUSA\\_NewVisionforEducation\\_Report2015.pdf](http://www3.weforum.org/docs/WEFUSA_NewVisionforEducation_Report2015.pdf).
- . 2016. *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf).
- . 2018. *Eight Futures of Work: Scenarios and Their Implications*. [http://www3.weforum.org/docs/WEF\\_FOW\\_Eight\\_Futures.pdf](http://www3.weforum.org/docs/WEF_FOW_Eight_Futures.pdf).
- Yeh, Stuart S. 2017. *Solving Achievement Gap: Overcoming the Structure of School Inequality*. New York: Palgrave Macmillan.
- York-Barr, Jennifer, William A. Sommers, Gail S. Ghore, and Joanne K. Montie. 2017. *Reflective Practice for Renewing Schools: An Action Guide for Educators*, 3rd ed. Thousand Oaks, CA: Corwin.

## ABOUT THE AUTHOR

**Marut Patphol:** Academic Lecturer, Graduate School, Srinakharinwirot University, Bangkok, Thailand

***The International Journal of Pedagogy and Curriculum*** is one of ten thematically focused journals in the collection of journals that support The Learner Research Network—its journals, book series, conference, and online community. The journal explores the processes of designing and implementing learning experiences and the dynamics of learning.

As well as articles of a traditional scholarly type, this journal invites presentations of practice—including documentation of curricular practices and exegeses of the effects of those practices.

*The International Journal of Pedagogy and Curriculum* is a peer-reviewed, scholarly journal.