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Ḥikmah (wisdom) pedagogy and students' thinking and reasoning abilities

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Abstract: This research drew on the authors' long experience in the implementation of the *"Hikmah* Pedagogy*"* which is based on the Philosophy for Children's teaching method. Specifically, the study examined the influence of the pedagogy on the participants' perceptions of and feelings about their thinking and reasoning skills. The sample comprised 188 Malaysian and international students from an international secondary school in Malaysia. This consisted of students in four Grade levels, ranging from Grades 7 to 10. An instrument named "*Hikmah* Feedback Survey - HFS" was employed for data collection. The findings were supportive of the positive influence of the pedagogy on students' abilities to think and reason better after experiencing the programme. Furthermore, the participants demonstrated a considerable improvement in their cognitive and social-communicative skills, as evidenced in the scores obtained for the post-programme's test. This affirms the fact that the *ḥikmah* pedagogy is highly recommended in Malaysia's march towards its Vision 2020 developmental goals. Implications of the study were discussed and suggestions were proposed to educators and stakeholders in secondary school education.

Keywords: Communication skills; *ḥikmah* pedagogy; philosophy for children; teaching method; thinking skills.

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Abstrak: Kajian ini mengambil kira pengalaman luas penulis dalam melaksanakan "*Pedagogi Hikmah*" yang berlandaskan metode pengajaran falsafah untuk kanak-kanak. Khususnya, kajian ini mengkaji pengaruh *pedagogi* tersebut terhadap persepsi dan perasaan peserta program tentang kemahiran mereka berfikir dan mena'akul. Sampel kajian ini terdiri daripada 188 orang pelajar Malaysia dan antarabangsa dari gred 7 hingga 10 di sebuah sekolah menengah antarabangsa di Malaysia. Instrumen kajian yang dinamakan "*Hikmah* Feedback Survey – HFS" telah digunakan untuk pengumpulan data. Hasil kajian mendokong pengaruh positif program tersebut terhadap kemampuan pelajar untuk berfikir dan mena'akul dengan lebih baik setelah mengikuti program tersebut. Selain daripada itu, peserta menunjukkan kemajuan yang memberangsangkan dalam kemahiran kognitif dan sosio-komunikatif. Ini jelas daripada ujian pasca program yang lebih tinggi. Dapatan kajian ini menunjukkan bahawa pedagogi *hikmah* patut disokong sepenuhnya di Malaysia bagi mencapai matlamat pembangunan 2020. Akhirnya, implikasi kajian dibincangkan dan cadangan diutarakan kepada para pendidik dan pihak berkepentingan dalam pendidikan sekolah menengah.

Kata Kunci: Kemahiran berkomunikasi; pedagogi *hikmah*; falsafah untuk kanak-kanak; kaedah pengajaran; kemahiran berfikir.

In recent times, there is a growing interest among educators and education policy makers in teaching and learning methods that foster critical thinking (CT) and problem solving skills (PS). This is partly because a number of scholars and psychologists have identified these skills as vital ingredients in helping students understand and solve problems (Daniel & Auriac, 2011; Jones, 2008; Nardone & Lee, 2011). These skills, especially critical thinking, represent the three highest levels of the cognitive domain of Bloom's Taxonomy of educational objectives. Critical thinking can occur at all levels of learning in Bloom's Taxonomy (Friedman et al., 2010). For instance, while understanding ranks the lowest in Bloom's classification of learning and requires less critical thinking, the highest level – evaluation (and most recent, creation) – requires more critical thought. To this end, several methods and approaches that could lead to teaching and imparting skills for CT and PS have been proposed by scholars (Daniel & Auriac, 2011; Havasy, 2001; Jones, 2008; Lipman, Sharp & Oscanyan, 1980; Nardone & Lee, 2011). Some of these approaches include concepts like inquiry-based learning (IBL), problem-based learning (PBL), learner-centred approach (LCA), student's problem posing (SPP), and philosophy for children (P4C). One common

feature of these approaches is a tendency to transform students into active learners with the ability to think and reason more creatively and independently.

This paper draws on the authors' experience in the implementation of "*Hikmah* Pedagogy" which is based on the Philosophy for Children (P4C) Programme. *Ḥikmah* is an Arabic word that has been assimilated into the Malay language and means "wisdom". The study specifically explores the influence of the programme on students' perceptions of their thinking and reasoning abilities and on social-communicative skills before and after its implementation among selected international secondary school students.

Critical thinking and problem solving skills

The need to educate students to think critically and imbibe the skills of problem solving is a fundamental responsibility of educational institutions. In fact, there is no gainsaying that this is the vital reason for the existence of universities and its teeming faculty members. Scholars have identified these skills as vital for students' academic success. For example, Siegel (1988) pointed out that CT skills help students become autonomous thinkers, that is, one who thinks, acts, takes a stand, and works out judgments based on reasons. These skills can also affect a student's ability to succeed in the classroom learning process and record excellent academic achievement (Williams & Worth, 2003). Thus, teaching thinking skills is central to achieving desirable, quality, and functional education goals. According to Baumfield (2004), thinking skills approach is considered a strong pedagogical strategy, mainly due to its motivational character. More importantly, the majority of studies on teaching thinking skills have yielded positive results about the impacts of the method on learners (Daniel & Auriac, 2011; Friedman et al., 2010; Jones, 2008; Nardone & Lee, 2011). Some of the gains from this method are identified as general transferability of skills, an improvement in pupils' academic performance and idea generation, as well as increase in the professional knowledge of teachers (Rockett & Percival, 2002).

In a meta-analysis on thinking skills intervention, Higgins, Hall, Baumfield, and Moseley (2005) reported that the use of a thinking skills programme improved students' cognitive performance, and this effect was greater than most other educational interventions. Similarly,

in the review of research projects on P4C, Trickey and Topping (2004) reported that the programme had several positive outcomes on learners. These outcomes included the learner's ability to demonstrate logical reasoning, critical thinking, creative thinking, high self-esteem, listening, and engagement in group discussion. Therefore, critical thinking skills are vital ingredients to facilitate deeper knowledge of course content, moving from acquiring information to its application, enhancing deeper levels of sustained thinking and critical reflection, and to more readily identifying the linkages between course content, their own learning, and non-academic related experiences (Brown & Walter, 2005; Crawley, Curry, Tanner & Wyker, 2008; de Jesus, Almeida, Teixeira-Dias & Watts, 2006; Greene, 2005; Yu & Liu, 2009).

Malaysian schools and the need for critical thinking skills

Like many other educational institutions across the globe, Malaysian schools are no exception to the teaching and learning methods that offer students little or no opportunities to become critical and creative thinkers, and/or active partners in producing knowledge. This deficiency could obstruct Malaysia's "Vision 2020" developmental aspiration. For instance, the country has targeted, in her march towards Vision 2020 (as contained in Dr. Mahathir Mohamad's (1991) speech tagged "Malaysia: The Way Forward"), to achieve a strong and functional educational system – one which equips its students with required skills to manage both the system and the people. The Malaysian Educational Development Plan (PPPM) 2013-2025 spells out the need for students with critical thinking skills to run its technological, mechanical, and agro-industrial economy among other critical sectors.

However, there are concerns among educators and the general public over the lack of depth which characterises the knowledge attained by the majority of students in the current educational system. The existing educational practice in the country places too much emphasis on tests and examinations and the outcomes of these assessments act as the main determinants of how far any student would go in educational pursuits. These outcomes are also relied upon in placement of students in their fields of specialisation. Thus, students are constantly on their toes for high stake examinations. Consequently, teaching and learning are almost exclusively done for the sake of examinations.

One implication of the examination-oriented school practice is its limitation of students' ability for critical and creative thinking. At any time, students are always battling with shortage of time allowance to exercise rigorous thinking and reflect on their views or understandings on issues due to teachers racing against time to complete the syllabus. In the absence of much needed time for deeper reflection, the best any student can achieve is to become good at memorising or recording the ideas of tutors or textbooks.

Furthermore, the examination-dominated curriculum hinders students' ability to acquire the key skills considered valuable by employers for job effectiveness. This partly explains the growing concern by employers on the low competence and marketability of Malaysian graduates. Ramlee (cited in Rasul & Puvanasvaran, 2009) pointed out a discrepancy between graduate learning and employers' expectations. For instance, Ramlee noted that technical graduates in Malaysia have mastered their technical skill but employers feel dissatisfied with their employees due to lack of motivational skills, communication skills, interpersonal skills, critical thinking, problem solving, and entrepreneurship skills. This observation is further corroborated by reports that the government will propose the scrapping of the centralised and standard "Penilaian Menengah Rendah" (Lower Education Assessment) and retain the UPSR (Primary School Examination) but make it partially school-based. According to the Deputy Prime Minister who is also the Education Minister, Tan Sri Muhyiddin Yassin, these two examinations may be scrapped "as part of the government efforts to restructure the learning system that are seen as too examination-oriented and failed to provide a holistic education" (Tony Pua, 2010). Without an iota of doubt, this education practice is capable of tempting students to see examinations as the hallmark of school experiences which must be dealt with by whatever means (including academic misconducts) to achieve desirable results at graduation time.

The *ḥikmah* pedagogy of philosophical inquiry

Considering the above hindrances, there arises a need for a pedagogy of philosophical inquiry akin to the Philosophy for Children (P4C) approach in schools. The P4C's teaching method, as proposed by the American philosopher and founder Matthew Lipman at the beginning of the 1970s (Lipman *et al*., 1980), primarily aims to develop critical

thinking in learners through philosophical dialogue which evolves in a perspective of cooperation to enrich the group's perspective versus competitive argumentation, where victory at all costs is an individual objective (Lipman, 1995, 2003). Studies have shown that thinking can be transferred and this approach can be infused in the teaching of other school subjects like English, Mathematics, Science, Geography, History, Technology, Art, and Music (Fisher, 1998). Several research findings, mostly from Western countries, have affirmed the usefulness of this approach in enhancing thinking and reasoning skills among students (Daniel & Auriac, 2011; Derrico, 1988; Jones, 2008; Lipman, 1988). For instance, Daniel and Auriac noted the efficacy of P4C's approach as follows: "…even the pupils who were newly introduced to P4C manifested critical thinking skills at the end of one school year".

The "*Hikmah* Pedagogy" which was officially introduced in Malaysia in 2006 through the Centre for Philosophical Inquiry in Education, International Islamic University Malaysia, was an adaptation of the P4C. It serves similar goals of improving critical thinking skills, developing creativity, personal and interpersonal growth, developing ethical understanding, and the ability to find meaning in experience. However, it added another dimension of the indigenous worldview, in particular its value system. Thus, the *ḥikmah* pedagogy includes reflection on the Qur'ānic verses, Prophet Muhammad's (S.A.W.) Traditions and the local Malaysian traditions through stories specially designed for this purpose. Rosnani (2009) argued that philosophical inquiry has always been part of the Muslim tradition and needs to be revived. Several studies on the *ḥikmah* pedagogy in the form of quantitative, qualitative, and mixed methods (Preece, 2012; Rosnani, Suhailah, & Adila, 2014) have yielded encouraging results on improvement of reasoning abilities and personal growth of self-confidence, open-mindedness, communication, and inquiry skills. In the Malaysian school context, the pedagogy is infused in the teaching of English, Malay, Islamic Studies and Moral Education, and is also taught as a stand-alone subject.

The primary goal of the present study, which is within a different context compared to previous studies, is to examine participants' feelings and attitudes toward the *ḥikmah* pedagogy. In this study, the participants are international students of varied cultures and languages. Specifically, the study aims to determine, first, participants' views of the teaching method in applying the *ḥikmah* pedagogy. Second, it intends

to ascertain if the *ḥikmah* pedagogy helped in enhancing participants' self-development in critical thinking skills and self-confidence. Third, it investigates if there are any significant differences in the participants' frequency of applying critical thinking and communication skills before and after the application of the *ḥikmah* pedagogy method. Finally, this study desires to examine if there is a significant difference in the participants' frequency of applying critical thinking and communication skills across the different grade levels.

Method

This study applied the quantitative approach through a cross-sectional survey design in the collection and analysis of data to address the goals of the study. A cross-sectional survey design offers the opportunity to evaluate the effectiveness of a programme and provide useful information to decision makers (Creswell, 2008, p. 391). The survey was administered at the end of the academic year in which the *ḥikmah* pedagogy method was used to teach all the students across the four targeted grade levels. The authors approached the site of the study with four trained facilitators, one for each grade level, who applied the *ḥikmah* teaching method and materials to teach the participants. The teaching period was once a week and this lasted for two semesters, that is, about nine months. Thereafter, the participants were given the survey to respond to.

Participants

The sampled participants numbered 188 students from Grade 7 to Grade 10 of an international secondary school in Malaysia. They consisted of 98 males and 90 females; 19 Grade Seven students, 52 Grade Eight students, 67 Grade Nine students, and 50 Grade Ten students; 148 international students and 40 local Malaysian students. In terms of previous experience with *ḥikmah* pedagogy, 52 students had less than six months experience, 55 students had six to nine months; 46 students had at least 9-12 months; 9 students had more than 12 months; while 26 students did not indicate the length of their experience.

Instrumentation

The study used a self-constructed instrument tagged "*Hikmah* Feedback Survey (HFS)" for data collection. This instrument

consisted of four main sections. The first section entailed five items about demographic characteristics of the participants. Some of the variables captured include school, gender, class grade, nationality of respondents, and experience with the *ḥikmah* programme. The second section consisted of 14 items that assessed the respondents' general feelings and perceptions of the texts and teacher's skills in conducting the programme. The feelings and perceptions were measured on a 5-point Likert scale, ranging from one (Strongly Disagree) to five (Strongly Agree). Summing the items resulted in a total score ranging from 14 (low/negative feelings and perceptions) to 70 (high/positive feelings and perceptions). A high score for strongly agree means that the feelings/perceptions of students about the programme is positive and supportive, and vice versa for a high score on strongly disagree. The third section consisted of 18 items on the different ways the *ḥikmah* pedagogy could have helped the students in critical thinking and interpersonal skills. Participants responded on a scale ranging from one (Strongly Disagree) to five (Strongly Agree). The interpretation of scores for this scale is similar to the previous scale on feelings and perceptions. The fourth section of HFS contained 18 items capturing participants' self-evaluation of their levels of critical thinking skills, interpersonal/communication skills and self-confidence, before and after undergoing the nine-month period of learning with the *ḥikmah* approach. This assessment of pre- and post-*ḥikmah* programme was measured on a 5-point Likert-like scale, ranging from one (Never) to five (Always). Summing the items resulted in a total score ranging from 18 (low self-evaluation in the listed skill areas) to 90 (high self-evaluation in the listed skill areas). A high score for "always" means that the respondents have a high estimation of their level of critical thinking, reasoning and communication skills, either before or after experiencing the programme; and vice versa for the low score. Whereas, a high score for "never" implies that the respondents have a low estimation of themselves in the skill areas listed. The fifth section consisted of an open-ended question that asked specifically whether the participants liked or disliked the *ḥikmah* learning approach. Only two response options were allowed ("Yes" for liking the programme or "No" for disliking it). The respondents were also required to provide reasons for their chosen option, i.e., their reasons for liking or disliking the *ḥikmah* programme.

Validity and reliability of scales

The evidence of validity and reliability of the *Hikmah* Feedback Survey (HFS) was established prior to data collection and before using the *ḥikmah* pedagogical approach in the targeted classes. Face and content validity, Cronbach's alpha reliability, and factor analytic procedures were applied to generate adequate reliability and validity estimates for the scales. At the end of the exercises, the 51 items generated initially for the instrument dropped to 29 items after all cross-loading and low loading items were removed. The remaining valid items produced a three factor-solution. The three factors, with KMO of .814 and Bartlett's test of .000, explained 50.6% of the total variance in the participants' feelings and perceptions of *ḥikmah* programme. The three factors were subsequently named The Teaching Method (Factor 1, with 9 items), Programme Effects (Factor 2, with 8 items), and Self-Enhancement (Factor 3, with 12 items). Furthermore, tests of reliability estimates for the instrument showed that the three factors have Cronbach's alpha of 0.850, 0.836, and 0.854, respectively. The overall Cronbach's alpha for the three factors was 0.856. Details of items for each factor, their loadings, as well as reliability estimates for the factors are displayed in Table 1.

Table 1: Factor loadings and reliability estimates for scale dimensions

TVE = 50.6%; KMO = .814; Bartlett's Test = .000; Overall C/Alpha = .856			
Factors	Items	Factor Loadings	Cronbach's Alpha
1.Teaching Method	The exercises accompanying the texts are challenging.	.710	.850
	The class discussion is interesting.	.705	
	The teacher asks students to give their views/ opinions on issues.	.696	
	The exercises require me to think more deeply.	.670	
	The teacher encourages students to participate actively in the class discussion.	.662	
	The teacher uses variety of materials to aid class discussion.	.637	
	Besides the texts, there are other interesting activities like conceptual games.	.576	
	There are enough exercises to do after each text.	.566	
	ḥikmah texts provoke curiosity to ask questions.	.531	

2.Programme Effects	The programme has helped me to be more confident in expressing my ideas.	.737	.836
	The programme has helped me to communicate my ideas with others more clearly.	.675	
	The programme has helped me to be more curious about things around the globe.	.674	
	The programme has helped me to think more about Islamic ethics and values.	.661	
	The programme has helped me to be more confident in speaking.	.651	
	The programme has helped me to think more deeply when I read.	.555	
	The programme has helped me to be more critical in defining a concept.	.536	
	The programme has helped me to ask more critical questions.	.533	
3.Self-Enhancement	I am confident in expressing my views.	.693	.854
	I can build on other's ideas in a discussion.	.693	
	I can make a logical conclusion in a dialogue with others.	.671	
	I can give examples or counter examples to support my views.	.659	
	I can make a balanced, sensible judgment on variety of issues.	.649	
	I can communicate my ideas to others very clearly.	.646	
	I am able to define a concept in clearer terms.	.627	
	I welcome hearing the other side of the story before taking a position on issues.	.624	
	I can support my views with convincing reasons.	.616	
	I ask critical questions about things around me.	.593	
	I speak by turn in order to be heard.	.522	
	I think more of ethics and moral values in my daily life.	.513	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalisation.

Results

The findings of this study are categorised into two sections. The first section presents the descriptive results for the first and second research objectives, while the second section is devoted to the inferential statistical findings for the last two research objectives.

View of teacher's skills in executing the ḥikmah programme

The respondents' views toward the teacher's skills in executing the *ḥikmah* programme (Table 2) was determined using descriptive statistics. For ease of analysis and report presentation, the generated data on the 5-point Likert scale were collapsed into three response columns; strongly disagree and disagree options were merged as "Disagree", and agree and strongly agree options were merged as "Agree". The middle scale (neutral option) was retained.

Table 2: Participants' feelings about ḥikmah programme teacher's skills

Response Categories	**Disagree**		**Neutral**		**Agree**	
Items	**N**	**%**	**N**	**%**	**N**	**%**
The exercises accompanying the texts are challenging.	50	26.7	40	21.4	97	51.9
The class discussion is interesting.	113	60.4	24	12.8	50	26.7
The teacher asks students to give their views/ opinions on issues.	48	26.0	59	31.9	78	42.2
The exercises require me to think more deeply.	50	26.7	54	28.9	83	44.4
The teacher encourages students to participate actively in the class discussion.	34	18.0	44	23.4	100	58.5
The teacher uses variety of materials to aid class discussion.	19	10.1	30	16.0	138	73.8
Besides the texts, there are other interesting activities like conceptual games.	13	7.0	22	11.8	152	81.3
There are enough exercises to do after each text.	90	48.1	45	24.1	52	27.8
Ḥikmah texts provoke curiosity to ask questions.	49	26.4	50	26.9	87	46.8
Average Scores	**52**	**27.7**	**41**	**21.9**	**93**	**50.4**

Table 2 shows that half of the participants (50.4%) felt that the teachers employed the appropriate *ḥikmah* teaching approach (Teacher's skills) in contrast to a quarter (27.7%) who felt otherwise, and another quarter who were unsure of their views. The highest majority (81.3%) noted

that the teacher also employed interesting activities, the use of the *ḥikmah* text, especially having conceptual games. The next highest majority (73.8%) noted that the teacher employed a variety of strategies to aid classroom discussion. More than half of the students (58.5%) felt that the teacher encouraged them to participate actively in the class discussion, and almost 52% felt that the exercises accompanying the text were challenging. However, a large percentage (60.4%) disagreed that the classroom discussion was interesting, and another 48.1% believed that the exercises supporting the text were not sufficient.

The findings concerning if the *ḥikmah* pedagogy helped in enhancing the participants' self-development in critical thinking skills, communication skills, and self-confidence are shown in Table 3. In general, about half of the participants (52.1%) agreed that the programme has made a positive impact, in contrast to less than a fifth (17.1%) who disagreed. Specifically, 59.1% felt that it helped them to think more deeply when they read a text, 58.8% felt that it helped them to think more of Islamic ethics and values, and 58.8% agreed that it helped them to be more confident in speaking.

Table 3: Participants' view of impact of ḥikmah programme on self-enhancement

Response Categories	**Disagree**		**Neutral**		**Agree**	
Items	**N**	**%**	**N**	**%**	**N**	**%**
The programme has helped me to be more confident in expressing myself.	43	23	63	33.5	82	43.6
The programme helped me to communicate my ideas with others more clearly.	30	16.7	64	35.8	85	47.5
The programme has helped me to be more curious about things around the globe.	36	19.2	66	35.1	86	45.7
The programme has helped me to think more about Islamic ethics and values.	22	11.7	55	29.4	100	58.8
The programme has helped me to be more confident in speaking.	25	13.3	53	28.3	109	58.3
The programme has helped me to think more deeply when I read.	29	15.6	47	25.3	110	59.1
The programme has helped me to be more critical in defining a concept.	31	16.5	50	26.6	107	56.7
The programme has helped me to ask more critical questions.	39	20.9	61	32.6	87	46.5
Average Scores	**32**	**17.1**	**57**	**30.8**	**96**	**52.1**

As further evidence of the positive feelings about the programme, Table 4 shows that almost three-quarters of the participants (73.2%) expressed likeness and appreciation of the programme compared to almost a quarter (26.8%) who expressed dislike for it.

Table 4: Frequency of liking/disliking of ḥikmah programme

Variables	Frequency	Percent
I like *ḥikmah* programme	123	73.2
I dislike *ḥikmah* programme	45	26.8
Total	**168**	**100**

The participants who liked the *ḥikmah* programme gave the following reasons to support their views: "It is quite interesting; it enhances communication skills; it improves thinking skills; it boosts self-confidence; it enhances listening skills; and the teachers are competent." While those who disliked it gave reasons such as: "It is uninteresting; absence of games; teachers lack competency; the topics are boring and no colourful materials," for their disaffection. Overall, the general feelings and attitudes of students about the programme were positive and supportive. A large number felt that the method was more effective for teaching and learning, as it gave them a sense of active participation in the process of knowledge creation, and the teachers were seen to be more equipped and skilful in content formation and delivery.

Pre- and Post-programme's Test on thinking and reasoning skills

The third objective of the study was to investigate any significant difference between the means of the pre- and post-programme scores for critical thinking and communication enhancement skills which is this pedagogy's main purpose. To achieve this, students scored items on their cognitive processes before and after following the *ḥikmah* programme on a scale ranging from 1 (Never) to 5 (Always). A paired sample t-test for difference of means was conducted. The results show that there was a statistically significant difference in the means of the pre- and post-tests (Table 5). There was an increase in the participants' perceived frequency of applying critical thinking and interpersonal skills after exposure to the *ḥikmah* teaching approach, with the mean of post-programme test ($M = 3.43$; $SD = 0.68$) greater than the mean score of the pre-programme test ($M = 3.12$; $SD = 0.69$), $t\ (166) = -4.54$, $p = .000$ (two-tailed). The mean increase in the respondents' frequency of

thinking after the programme was 0.31 with a 95% confidence interval ranging from -0.45 to -0.18. The eta-squared statistic (.06) also indicated a medium effect size (Pallant 2007, p. 222).

Table 5: Paired samples t-test for pre- and post- ḥikmah programme (N = 167)

		Mean	Std. Dev.	Std. Error of Mean	95% Confidence Interval Lower	Upper	t	df	*p*
Pair 1	Pre-Prog. Test	3.12	.69	.069	-.447	-.176	-4.54	166	.000
	Post-Prog.Test	3.43	.68						

Upon establishing the existence of a statistically significant difference between the means of pre- and post-programme scores, an attempt was made to answer the fourth objective of the study which concerns whether there was a significant difference in the post-programme mean scores across the four grade levels using a one way ANOVA test. For this purpose, the sub-groups of each level were collapsed into a single group for each level (e.g., Grade 7 A, B, and C as Grade 7; Grade 8 A, B, and C as Grade 8; Grade 9 A, B, and C as Grade 9; and Grade 10 A, B, and C as Grade 10, respectively). This was done because the cases for sub-groups of each grade level are not equally distributed. For instance, while some classes are highly represented in the study, others are not, e.g., sub-classes in Grade 7. Thus, collapsing the sub-groups, in line with Pallant's (2011) recommendation, becomes necessary for ease of analysis. The results of the ANOVA (Table 6) show there was a significant difference in mean scores by level.

Table 6: One-way ANOVA for differences of post-programme

Source of Variance	**Sum of Squares**	**df**	**Mean Square**	**F**	***p***
Between Groups	9.226	3	3.075	7.540	.000
Within Groups	66.485	163	.408		
Total	**75.711**	**166**			

To see the details of the differences across levels, the pre- and post-means of the various grades are shown in Table 7. An examination of the means for all pre- and post-scores for the different grades levels in Table 7 shows that with the exception of Grade 8, all the other means for post-programme scores increased. The highest difference was felt by the Grade 7 (from a mean of 3.09 to 3.70), followed by Grade 10 (from a mean of 3.09 to 3.67), and Grade 9 (from a mean of 2.98 to

3.44). This implies that the programme has been effective in promoting critical thinking skills, self-confidence, and communication skills. The deviation noticed in the result obtained for Grade 8 could be due to the replacement of the assigned trained teacher with a new untrained teacher by the school authority because the former left the school.

Table 7. Summary of mean scores and standard dev. for pre- & post- programme's tests

	Pre-Programme Test			Post-Programme Test		
Grade Levels	**N**	**Mean**	**Std. Dev**	**N**	**Mean**	**Std. Dev**
Grade 7	16	3.09	.45	16	3.70	.44
Grade 8	48	3.39	.80	45	3.09	.78
Grade 9	61	2.98	.65	60	3.44	.63
Grade 10	49	3.09	.62	46	3.67	.55
Total/average	**174**	**3.13**	**.69**	**167**	**3.44**	**.60**

Discussion

The focus of this research was to examine the students' feelings and opinions about the use of the *ḥikmah* teaching approach in the classroom, and to determine if the approach has had a significant influence in their critical thinking and communication skills. The findings regarding the first objective indicate that the overall feelings and perceptions of the participants about the *ḥikmah* pedagogy were positive. Most of the participants largely agreed that the programme was beneficial. These findings are consistent with previous studies. Jones (2008) reported that P4C's teaching method enhances critical and creative thinking, as well as caring and collaborative thinking, and improves pupils' cognitive performance (Higgins, Hall, Baumfield, & Moseley 2005). Likewise, in the study on developing capacities for critical thinking and philosophical reasoning in schools, Rosnani (2011) reported that participants felt that the programme had a positive influence on their self-confidence, emotional maturity, and general self-understanding.

Pertaining to the third and fourth objectives (whether the programme had a positive influence on participants' critical thinking and communication skills and whether there are differences by grade level), the results of a paired sample t-test and ANOVA test affirmed that the programme had a positive significant influence on the participants' levels of critical thinking and communication skills. This positive influence was not confined to a particular form level but cut across all

the Grade levels examined with the exception of Grade 8. The poor results obtained for Grade 8 was later explained by the school authority that it has to replace the grade with a new untrained teacher because the trained teacher left. Overall, this outcome is highly impressive and lends great support to the need for this philosophical inquiry approach as a means to foster high critical thinking and communication skills in learners. This finding also conforms to the findings of previous studies. Researchers in the field have shown that the participants of the P4C teaching approach became more critical in thinking and reasoning after experiencing with this teaching approach (Jones 2008; Lipman, 2003; Rosnani, 2011). According to Jones, the use of P4C has resulted in enhancing learners' cognitive and social skills. Consistent with Jones, Rosnani (2011) remarked that years of experience in the application of *ḥikmah* pedagogical inquiry method in classrooms, confirmed her belief that the programme is beneficial to students in many ways. Similarly, Daniel and Auriac (2011) gave a positive report of the perceived efficacy of P4C teaching method. According to these scholars, even the pupils who were newly introduced to the P4C teaching method manifested critical thinking skills and dispositions at the end of one school year.

Conclusion and implications

The findings of this study have further validated our beliefs and hopes in the efficacy of the *ḥikmah* philosophical inquiry method to foster and develop critical thinking skills in learners. The results of the present study clearly show that this method is favoured by many students and is capable of boosting not only self-confidence in students while speaking or expressing their views, but enhancing their cognitive, reflective, and communicative skills. This result, therefore, calls for pro-active action from educators and other vital stakeholders in the nation's youth education. School administrators at all levels should, as a matter of urgency, devise pragmatic steps through which the implementation of this approach in schools would become a dream actualised. This pedagogy is needed now more than ever to guide Malaysian youths, particular Muslim youths, to make sound and well informed decisions about living in the contemporary world, which is more pluralistic and complex in all respects.

Although the implementation of the *ḥikmah* teaching pedagogy could be instrumental in producing desirable outcomes in students'

thinking and academic achievement in the long run, it is important to stress that some conditions are crucial to achieve this success. At the minimum, this study, through feedbacks obtained from the open-ended question, identifies that teacher's skills, quality, and relevant resource materials, as well as adequate opportunity for games and hands-on creative activities, are necessary ingredients to stimulate students' interests in the programme. Thus, administrative support from school heads is vital. This has to do with making funds available to procure all the necessary useful materials that could aid the application of this pedagogy in classroom teaching and learning. There is also a need to invest in the training of educators (teachers) to improve their skills and knowledge of the *ḥikmah* pedagogy process and its implementation. This view agrees with Jones's (2008) remark, who noted that practitioners' ability to identify and grow thinking skills needed to be carefully developed if the philosophical inquiry method is to be taken seriously as an approach capable of developing pupils' reasoning/thinking skills.

Finally, it is important to point out that this study has some constraints and as such, the extent to which our findings could be generalised are limited. First, the sample size is not varied but come from a single setting. It would have been ideal to draw more participants from multi-institutional settings. Besides, the sampling technique adopted (purposive sampling method) does not lend support to equal representation of the participants. It does, however, afford the researcher ample chance to include the participants who are more willing to participate and supply useful responses to address the goals of the study. Future studies are urged to give preference to a bigger sample size, and apply the randomisation principle in the selection of participants. The actual impact of the *ḥikmah* pedagogy method on the participants' level of thinking and reasoning skills can be further investigated using an experimental research method, i.e., which allows a direct comparison between the outcomes obtained for the treatment and non-treatment groups (Creswell, 2008, p. 300).

At this junction, it should be pointed out that while this study found the *ḥikmah* philosophical inquiry approach very useful and beneficial to students in terms of developing their thinking and reasoning skills, as well as boosting self-confidence and communicative skills, its constraints, however, include poor implementation, and non-application of relevant resource materials in the process. If these concerns are

carefully revisited, it is more likely that students would achieve higher levels of knowledge alluded to in the revised Bloom's Taxonomy (Anderson & Krathwohl, 2001), and critical thinking skills required to function better in today's multi-complex environment.

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