

*Passion-Based Learning Under COVID-19:
Students' Perceptions for Implementation, Engagement and Passion
in a Hong Kong Primary School*

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The European Conference on Education 2023
Official Conference Proceedings

Abstract

Passion-based learning (PBL), an education mindset to unleash students' potentials, is considered an innovative approach coherent to Education 3.0 as learning is mainly driven by learners. The existing studies, however, have neither drawn conclusive results towards the effectiveness of PBL, nor contextualized in Hong Kong primary school under COVID-19. The aims of this research with mixed-methods design are to explore students' perceptions towards the implementation of PBL, engagement level and passion scale of PBL. Three-phase PBL, namely Passion Discovery, Passion Pursuit and Passion Sharing, was first implemented in a class of total 14 primary 5 students. Semi-structured individual interviews involving 6 Hong Kong primary school learners were conducted. Questionnaires comprised of 10-item implementation, 17-item academic engagement and 14-item passion scale were administered to all participants. Two triangulation research methods have been adopted. Field note is made throughout the process of implementation while video analysis is conducted upon the completion of passion project. The overall results from major research methods, interviews and surveys, indicate a positive and encouraging perceptions towards the three variables. On the other hand, field note and video analysis demonstrate consistent results for triangulation. Passion-based learning, from this research, is explored into its feasibility in a local school, and is expected to be promoted in a greater context.

Keywords: Passion-Based Learning, Passion, Hong Kong, COVID-19, Self-Directed Learning

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Chapter 1: Introduction

1.1 Research Rationale

While Education 3.0, the future of education, awaits, our current education stays unchanged. According to Gerstein (2014), Education 3.0 is interest-based learning. It highly supports student-centered learning. Students learn by themselves and play roles as authors, drivers and assessors of their learning experience.

Passion-based learning, an alternative for Education 3.0, is a student-driven education approach introduced in late 2007 (Strickland, 2011). It is a more self-directed learning (Blaschke, 2012) defined as “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes”.

1.2 Research Background

Engagement level continues to erode in pandemic period. A study by Perets et al. (2020) measured the impact of the transition to emergency remote online teaching on student engagement in an education course. They found that students noted difficulties staying committed to the course after the transition, and that individual research projects were more effective at retaining engagement than synchronous lectures and student presentations.

Passion, defined as a strong inclination and desire toward an activity one likes, finds important, and invests time and energy (Vallerand et al., 2003; Vallerand et al., 2007), is usually viewed in a dualistic model. Scholars propose that there are two types of passion—obsessive and harmonious—that differ in terms of how passion is internalized into one’s identity. In this paper, both harmonious and obsessive passions are to be concerned in the students’ survey and field notes.

Pandemic impact on education is experienced globally. The level of academic performance of the students is likely to drop for the classes held for both year-end examination and internal examination due to reduced contact hour for learners and lack of consultation with teachers when facing difficulties in learning/understanding (Sintema, 2020).

1.3 Research Aims

This research is aimed at exploring and answering the following questions:

1. What are students’ perceptions towards the implementation of PBL under pandemic?
2. What are students’ perceptions towards the engagement level and passion scale on Passion-based learning?

Chapter 2: Passion-Based Learning

2.1 Definition

Passion-based learning (PBL) is an education mindset that believes every student has potential that must be unleashed (Maiers & Sandvold, 2018). Students are empowered to discover and consume, communicate and connect, and create and produce based on their deep

seated interests. Maiers & Sandvold (2018) said that passion-based learning is about finding a “hero” who can make him/her successful acquiring the practice of established practitioners in the chosen field. Teachers can act as facilitators and observers. They let students come up with something they are really passionate about that can be related to the curriculum and allow them to work within that space (Nussbaum-Beach, 2011). In passion-based learning, students learn and pick material they are passionate about in specific element of curriculum (Nussbaum-Beach, 2011).

2.2 9-step PBL Framework

The process of PBL implementation in this study follows the 9-step PBL framework below, which was developed from 3-phase framework (Maiers & Sandvold, 2018). In phase one, Passion Discovery is comprised of (1) “Exposure”, to introduce PBL and expose students into various passions, (2) “Exploration”, to allow students to explore their passions by asking a number of questions, and (3) “Discussion”, to guide students to find the topic of their passion projects. The next phase, Passion Pursuit includes (4) “Assistance”, to assist their projects by suggesting passion experts and ways to research, (5) “Realization”, to set small steps and goals for students to accomplish their passion projects, and (6) “Evaluation”, to evaluate their outcome from success and difficulties. Final phase, Passion Sharing, consists of (7) “Method”, to share their project in different contexts, (8) “Outcome”, to summarize the knowledge, skills and attitude learnt, and (9) “Extension”, to extend students’ learning by developing next round of PBL.

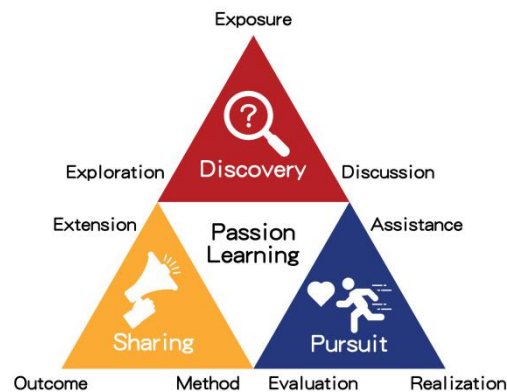


Diagram 1: 9-step PBL Framework

A formula is used (Maiers & Sandvold, 2018) to illustrate the connection among PBL, engagement and passion, in which the latter two indicators are the criteria in valuing students’ perceptions in this study.

$$\begin{aligned} \text{PBL} &= \text{What} + \text{Where} + \text{Who} \\ \text{PBL} &= \text{Engagement (What + Where)} + \text{Passion (Who)} \end{aligned}$$

Chapter 3: Methods

3.1 Theoretical Framework : Academic Engagement and Passion Scale

To measure academic engagement, I used the Utrecht Work Engagement Scale Student (Schaufeli, Salanova, et al., 2002), which comprises 17 items of which six measure vigour concerning behavioral engagement, five dedication about emotional engagement and six

absorption for cognitive aspect. Students responded to all items on a seven-point scale from 1 (strongly disagree) to 7 (strongly agree). The scales have been shown to report acceptable levels of internal consistency (.70 to .79), to show factorial validity, and to predict students' classroom behavior, such as learning behaviors during class (Mills, Culbertson, & Fullagar, 2012; Salanova et al., 2002; Schaufeli et al., 2002).

The Passion Scale (Vallerand et al., 2003) is a 16-item self-report questionnaire that is used to assess harmonious passion (6 items), obsessive passion (6 items), and the extent to which an activity coincides with the definition of passion (i.e., the "passion criteria"; 4 items). Items comprising the Passion Scale prompt respondents to indicate on a 7-point Likert scale the extent to which they agree or disagree with various statements about PBL.

In this research, the scale comprises 12 items of which six measure harmonious passion (e.g. 'Passion-based learning is in harmony with the other activities in my life') and six measure obsessive passion (e.g. 'I have almost an obsessive feeling for Passion-based learning'). Students responded to all items on a seven-point scale from 1 (strongly disagree) to 7 (strongly agree). The Passion Scale is a widely used measure of passion for various activities and has demonstrated reliability and validity in numerous studies (Vallerand et al., 2007; Vallerand et al., 2003)

3.2 Research Gap

As writing this essay, I still do not find many refereed article journals discussing this topic. The literature search was conducted in the ERIC, PsycINFO and Web of Science electronic databases because these databases contain the most publications regarding educational research. I used the term "Passion-based" & "Passion-driven" and a combination of educational terms ("learning", "teaching", "education", "academic engagement", "implementation", "intervention", "passion scale"). The search was limited to research articles in English.

Similarly, scholars confirmed that the ideas around this topic mainly discussed in professional education websites (Mas'ud,2019). What's more, no empirical study related to passion-based learning is found in the contexts of "Hong Kong", "Primary school" and "blended learning under pandemic". Therefore, huge research gap is yet to be filled in and gives rise to the driving force of this mixed-mode research.

3.3 Setting and Context

The study occurred in a P.5 academically less able class in a Hong Kong primary school. During online lessons, school time was cut to half-day schooling in which students ended their lessons at, normally, 1 p.m. In the first stage of passion-based learning, Passion Discovery was accomplished in both lesson time and online lessons. Students were to answer questions on an online platform to help identify their passions. After that, the second stage, Passion Pursuit, was carried out in both lesson time and extra spare time after school. Students spent some lesson time and mostly their after-school time to create their passion project collaboratively. Using electronic communication application, students share their opinions mainly after school. The last stage was done in the morning assembly time, which was the first 10 minutes of every school day.

3.4 Participants

In a P.5 class of 14 students, learners were separated into two sets of participants. The first set of students, 6 in total, involved in all the three stages of passion-based learning. The other set only participated in Passion Discovery. The involvement in the whole process was voluntary.

3.5 Instruments

Creswell (2012) defined the mixed-method approach as “an approach to inquiry that combines or associates both qualitative and quantitative forms” (p. 4). Moreover, Johnson and Onwuegbuzie (2007) believed that this approach allows researchers to “compensate for inherent method weaknesses, concentrate on inherent method strengths, and offset inevitable method biases” Greene (2007, p. 13).

Students’ interviews and students’ survey serve as the two primary sources of data informing the study. Researcher field notes and Document analysis were to confirm and/or question participants’ academic engagement and passion scale about the intervention.

3.5.1 Students’ Interviews

After the completion of three-step passion-based learning, 6 of the participants took part in an open-ended, participatory, semi-structured interview. Each interview lasts 15-20 minutes and occur during break time of school. Student interviews will be audio recorded and transcribed. The interview protocol and associated questions are designed to examine students’ perceptions towards the implementation of passion-based learning step by step. The interview consists of three main phases: (a) The completion of Passion Discovery, (b) The accomplishment of Passion Pursuit, (c) The enjoyment of Passion Sharing.

3.5.2 Students’ Survey

Students’ survey relies on four areas of inquiry: (a) implementation of PBL , (b) academic engagement (c) passion scale, (d) open-ended questions to give participants an opportunity to explain their perceptions freely and to express their attitudes toward PBL. First three areas of inquiry are assessed in terms of a 7-point Likert scale the extent to which they agree or disagree with various statements.

3.5.3 Researcher Field Notes

I was immersed in the passion-based learning environment as a participant observer for the whole process. I took detailed field notes focused specifically on participants’ engagement and passion during the intervention. The six main actors were typically involved in different stages of passion-based learning. My field notes included the context, activity, participants, length of observation, detailed descriptions , and any follow-ups. In the lessons, I looked for evidence concerning the measurements: implementation process, engagement and passion.

3.5.4 Document Analysis - Passion Project Video

According to Corbin & Strauss (2008), document analysis is a systematic procedure for reviewing or evaluating documents—both printed and electronic material. Like other analytical methods in qualitative research, document analysis requires that data be examined

and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge. Document analysis is used in combination with other qualitative research methods as a means of triangulation—‘the combination of methodologies in the study of the same phenomenon’ (Denzin, 1970, p. 291).

In my research, the significant document is the co-created Passion Project, the music video. It doesn’t only represent the completion of three stages of PBL, but students’ engagement and passion can also be found in their passion project, as non-technical literature, such as reports and internal correspondence, is a potential source of empirical data for case studies (Mills, Bonner, & Francis, 2006).

3.5.5 Interview Analysis

The research utilizes thematic analysis, a form of pattern recognition within the data, with emerging themes becoming the categories for analysis (Fereday & Muir-Cochrane, 2006). It takes a 4-phase analysis in the interview section.

3.5.6 Survey Analysis

The three variables are analyzed through SPSS and their corresponding measures such as mean, mode, median and standard deviation are generated. The results are correlated with central value of Likert-7 scale. Positive results are concluded for values higher than 4.429, the numeric representation of “Somewhat agree”, “Agree” and “Strongly Agree”.

3.5.7 Video Analysis

The current research, using the matrix style by Baldry and Thibault (2006), is a multimodal transcript modality that will combine still photos with descriptions of body movements and language used, by embedding digital images and film clips that can be opened and played. Analysis table will include time of clip, settings, speaker, utterance and other semiotic resources.

3.5.8 Field Notes Analysis

Assessment of field journals may be summative, where feedback is provided at the end of a course as an evaluation of learning and/or student performance, or formative, where feedback is provided throughout the course in support of student learning (Moss and Brookhart 2009). The present field notes were made right after the completion of each period, Passion Discovery, Passion Pursuit and Passion Sharing.

3.6 Triangulation



Diagram 2: Triangulation in this research

Chapter 4: Findings and Discussions

4.1 Research Question 1 - *What are Students' Perceptions Towards the Implementation of PBL Under Pandemic?*

4.1.1 Interview Data

In the first phase of PBL implementation, Passion Discovery, one of the themes from learners' perception is "Motivation for Discovery" which includes "Excitement", "Expecting future life" and "Passion promotion". The first type "Excitement" is related to "How do you feel about this phase?" Surprisingly, two of the most active and engaging participants passionately suggested a variety of exciting options about promoting PBL. Their inclination implies their passion in PBL as well as kindness to helping others to discover their passions. Not only the ideas were possible in future, but their passionate mindsets proved the success of the implementation. Possibility is limitless from class-based to school-based approaches. The researcher and corresponding school are assessing the feasibility of their suggestions, which might bring success to school-wide implementation.

In phase 2, Passion Pursuit, one of the two themes identified in this phase is "Team growth". In the process of Passion Pursuit, students emphasized the importance of "United as a team" and "Team building". A very motivating and inspiring view towards "How do you improve this phase?" was suggested. The current Passion Project served as a pioneer so only 6 out of 14 students participated. Yet a bigger team could be formed in future.

The third phase is called Passion Sharing. The first theme in this phase is "Self-growth" which covers "Confidence gained", "Peer relationship", "Appreciation" and "Expression". Boundless from fixed school curriculum, children could finally voice out their passions on a platform, the morning assembly time. The passion expression was perceived by both actors and the non-actor.

4.1.2 Field Note Data

The initial phase, Passion Discovery, aims at identifying students' passions. The data-driven codes are "Autonomy", "Passion", "Peer relationship" and "Expression of views". These codes can be categorized into two groups, "Motivation for Discovery" and "Methods of

Discovery”, which are exactly the codes used for interviews. What’s next, Passion Pursuit aims to practise and pursue their passions. The data-driven codes are comprised of “Peer-relationship” and “Skills”. They are highly relevant to the interview code “Team growth” and “Skills absorbed”. The resonance resembles a kind of learning from Passion Pursuit. Passion Sharing helps disseminate passion project. Data-driven codes are listed as “Confidence”, “Enjoyment” and “Appreciation”. Relevantly, codes can also be correlated into “Self-growth” and “Enjoyment”. To conclude, the implementation of Passion-based learning is found to attain the goal of each phase. High correlation between data-driven codes and interview codes signifies the high reliability of the mixed-mode research.

4.1.3 Survey Data

The nature of the survey data belongs to “one-way”, “ordinal” and “Likert scale data” (Clason and Dormody, 1994). Controversy has been drawn regarding the nature and analysis of Likert-scale questionnaire. Wu and Leung (2017) asserts that Likert scale is an ordinal scale but usually treated as an interval scale. Therefore, descriptive analysis including both ordinal and interval scale is to be done. In the following, survey data is analyzed regarding median, mode, frequency, in the view of ordinal data, and mean, arithmetic mean and standard deviation, in the view of interval data.

The first variable, “PBL Implementation”, possesses a promising result. Given very limited time for implementation, “Passion expert” in phase one (Q3) and “Thinkbook” in phase two (Q4) have not been mentioned yet. Despite the absence of two elements, it doesn’t affect the exploratory PBL implementation or the overall results. In phase one, majority of survey data goes towards good results significantly, especially for Q1. If Q3 is excluded, mean score 5.965 is calculated which relates much to “Agree” side. It implies that most participants perceived a successful implementation of Passion Discovery.

Similarly, negative result in Q4 implies the validity of the survey. As “Thinkbook” is a learning element requires much time to be implemented while the feasibility is in doubt, participants responded negatively. Except this, most data links to the positive side of Likert scale. Therefore, learners’ perceptions towards Passion Pursuit are positive.

What’s more, all indexes in Passion Sharing are correlated with the effective side. Positive values of median, mode, mean and arithmetic mean indicate the favourable result. Moreover, high validity is identified as the standard deviation of three questions exceeds 2. As only some learners involved in the passion project, many passions were not pursued or shared, echoes with the meaning of high standard deviation. To sum up, “PBL Implementation” is perceived successful in the eyes of learner survey.

4.2 Research Question 2A - *What are Students’ Perceptions Towards the Engagement Level on Passion-Based Learning?*

4.2.1 Survey Data

The second variable “Academic engagement”, even more favourably, generates nothing-bad results. First element “Vigour” takes a positive view. Except for Q3 “When I get up in the morning, I feel like doing PBL” which is understandable for too-early school time in Hong Kong, most results fall into a positive view. “Dedication” serves as the spotlight in this variable. Contributed by consistent mode of 7 point and relatively positive means &

arithmetic mean, all participants expressed their encouraging view. This noteworthy finding actually suggests that students truly dedicate much to both PBL implementation and passion project. It reaffirms the validity of the research methods as students engaged much in PBL.

Another element “Absorption” relates to neutral side comparatively. Yet, most promising result is related to Q4 “immersed with PBL” which resonates with the purpose of PBL. To conclude, all findings point to a very high engagement level by learners.

4.2.2 Field Note Data

Field note is made upon the three lessons on Passion-based learning. Codes are also drawn in terms of engagement level and correlated with survey codes. In Passion Discovery, data-driven codes concern with “Passion”, “Autonomy” and “Expectation”. With reference to academic engagement (Schaufeli, et al., 2002), the survey codes are listed as “Enthusiasm”, “Joy”, “Energy” and “Purpose” accordingly. Passion Pursuit’s data-driven codes are about “Full engagement”, “Passion”, “Enjoyment”, “Perseverance”, “Teamwork”, “Appreciation” and “Immersion”. Consistently, academic engagement mentions “Enthusiasm”, “Energy”, “Persevere”, “Meaning”, “Proud”, “Time flies” and “Immersed” respectively. The final phase Passion Sharing relates to “Appreciation”, “Future engagement”, “Enjoyment” and “Immersion”. They fit the codes from academic engagement “Proud”, “Meaning”, “Joy”, “Energy”, “Enthusiasm” and “Immersed”. To sum up, both observation and data-driven codes indicate a high level of engagement. Moreover, high correlation between survey codes and data-driven codes triangulates the data from survey and field note accordingly.

4.2.3 Video Analysis Data

The first engagement code “Enthusiasm” is specifically related to Student B, C and E. Looking into students’ various semiotic resources, researcher realized students’ enthusiasm was projected in different ways. Another code “Joy” is discovered in Student A,B,C,D and E. Apparently, actors enjoyed the video taking process. “Energy” that implies the vigour in engagement, is possessed in all the five actors too. Their energetic performance aroused audience’s interests. The last engagement code relevant to the passion video is “Immersed”. Particularly, this code implies a high level of engagement, thus only found in Student A and C. To sum up, video analysis shows that actors devoted much in the passion project and elicited a high level of engagement.

4.3 Research Question 2B - *What are Students’ Perceptions Towards the Passion Scale on Passion-Based Learning?*

4.3.1 Survey Data

Regarding the final variable “Passion”, the dualistic view (Vallerand et al., 2003) is comprised of “Harmonious Passion” and “Obsessive Passion”. Preferable results encompassing “Agree” on “Harmonious Passion”, and “Disagree” on “Obsessive Passion”. Expectantly, most findings in “Harmonious Passion” are positively correlated to the success of PBL. Regarding both ordinal and interval views, the findings consistently fall towards “Agree” side. Specifically, “Obsessive Passion” has a tendency to fall onto “Neutral” side. Both Q3 “difficulty imagining my life without PBL” and Q7 “My mood depends on me being able to do PBL” do not generate a favourable result. Yet, the findings are close to “Neutral” and high standard deviation is located. All in all, most data is preferred in terms of

“Harmonious Passion” whereas it is noteworthy to concern “Obsessive Passion” in future researches.

4.3.2 Field Note Data

The first phase, Passion Discovery, concerns with codes “Passion”, “Daily activity” and “Enjoyment”. “Passion” and “Enjoyment” are identified from the observation, that are similar to “Attractive” in survey data. The last phase, Passion Sharing, correlates to “Enjoyment” and “Passion”. For instance, Student E (Beatboxer) found a beatbox tutorial clip from Youtuber and included it in his clip. His “Passion to teach & share” beatboxing is one of the “Qualities he likes”. The correlation between data-driven code and survey code shows a high level passion.

4.3.3 Video Analysis Data

In addition to semiotics resources, actors’ utterances help identify passion level. The passion video is analyzed and compared with the codes in passion scale (Vallerand et al., 2003). Two of the codes are correlated namely “Qualities he/she likes” and “Daily activity”. The first code “Qualities he/she likes” implies that passionate people love the qualities they possess. In the passion project, Student A,B and E possess the characteristics. Their utterances show passion and curiosity towards self-learning. The uncommon special talent is probably a quality they enjoy a lot. Another code “Daily activity” signifies the consonance between passion activity and his daily life. Students’ passionate efforts in the passion project match with their daily activities Therefore, video analysis identifies actors’ passion in the video and its correlation with passion scale is high.

Chapter 5: Conclusion

5.1 Summary of Findings & Implications

Current exploratory mixed-methods study, which draws upon data collected from six semi-structured interviews with Hong Kong primary five learners and a survey administered to 14 learners, is structured in a way that answers to the two guiding research questions. In the following, the answers to these two research questions are summarized and presented.

The first research question “What are students’ perceptions towards the implementation of Passion-based learning under pandemic?” is investigated through interviews, field note and survey. A total of six themes that obtained from 9-step PBL constructs the framework for RQ1 investigation. Positive view from the interviewees on each theme indicates a flourishing PBL implementation. To empower the validity of the exploratory research, two-fold triangulation was enforced. Strong correlation was drawn between interview themes and field note codes. To conclude, students’ perceptions towards PBL implementation were promising and encouraging.

The other question “What are students’ perceptions towards the engagement level and passion scale on Passion-based learning?” is examined by survey, field note and video analysis. The uniqueness of sample size and sample profile in this exploratory research gives rise to the validity of quantitative analysis. Both field note and video analysis contribute much and have a strong correlation with engagement level and passion scale. The highly correlated findings imply a significant level of both academic engagement and passion. To

sum up, students' perceptions towards engagement level and passion scale were significantly assertive and favourable.

5.2 Limitations

A number of limitations have been encountered in the research. First, this class-based pioneer implementation is limited by its sample size and the uniqueness of sample profile. What's more, time was very limited for a primary five class who was facing Internal Assessment for Secondary School Places, especially under pandemic period. Most importantly, the scarcity of PBL researches, not to mention in the context of Hong Kong primary school under COVID-19, set the biggest obstacle to this pioneer research.

Nevertheless, the researcher has devoted much effort in the current research to alleviate the limitations. Correspondingly, both qualitative and quantitative methods are employed to investigate three variables, in order to generate a comprehensive picture of PBL. In the limited time, the researcher engaged as many students as possible in the process of interview, survey, field notes and video analysis. Most considerably, exploratory research questions and multiple methods with reference to relevant educational researches are employed through reading a variety of researches comprehensively.

5.3 Summary

This exploratory and visionary research on PBL is contextualized in a seem-to-be impractical Hong Kong primary school. It does not only impressed the school seniors and colleagues with the students' accomplishment and the possible future education, but it also draws attention to the feasibility of PBL in full-packed Hong Kong education system. The researcher sincerely hopes to contribute in the field of PBL by publicizing the research and sharing it with international researchers, in order to construct a sophisticated framework and guidelines for future PBL implementation. Future education should be individualized, student-driven, highly intrinsically motivated, full of creativity, curriculum co-constructed by both teachers and learners. In that way, Passion-based learning doubtless has a prominent place in future education.

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