

**UWTSD - DBA
Research Proposal**

Approaches to Research and Academic Communication



Dr. Luk

**HKBM7000
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LEVEL 7 ASSESSMENT SPECIFICATION

Student name:	Yu, Garry Wing Lok	Student ID number:	1916078
Programme:	DBA		
Module:	Approaches to Research and Academic Communication		
Module code:	HKBM7000	Contribution to Overall Module Assessment (%):	40%
Lecturer:	Dr. Luk Chung Leung	Internal Verifier:	
Assignment Title:	In-class Presentation	Time Allowed:	15 minutes
Submission deadline:	18 July 2020	Return date of provisional marks & written feedback:	7 September 2020
Submission method:	Each students needs to present to the class a summary of the research proposal within 10 minutes. The presentation is designed to gauge the student's ability to communicate and present information related to research and academic matters. A soft copy of the PowerPoint slides used for the presentation should also be submitted via Turnitin before the presentation.		
Academic honesty / referencing:	Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		



Research Topic

The implications of integrating artificial intelligence and big data into children conceptual development and pedagogical structure in Asia Pacific Region





- 1. Introduction**
- 2. Research Problems and Objectives**
- 3. Research Design:**
 - Research Framework
 - Research Method
 - Sampling and Measures
- 4. Data Collection and Analyses**
 - Proposed method and Processing
 - Data Analyses to be used
- 5. Findings and Recommendations**
- 6. Report and Conclusions**

Introduction

IDC –Corporate USA (2018) research found that more than 60% of businesses in the Asia Pacific region are now thinking about and how to build a scientific basis model and it is estimated that by 2022, more than 60% of G2000 companies worldwide will implement the promising technology to help them increase their productivity, work experience, and competitiveness. With the rapid development of information technology, education informatization presents an unprecedented development momentum (Pillow & Pearson 2009)

In recent years, the emergence of big data technology based on cloud computing, data mining and mobile communication has brought support in data acquisition, storage, analysis and decision-making for education research. The following summarizes and analyzes the generation of big data, the status quo of education application, the specific application situation in APEX region and the trend of education development, hoping to provide relevant reference for the captioned development of childhood education.



Research Problems

With the continued rise in the application of big data, educators also see considerable development and progress in different teaching methods into childhood conceptual development.

1

Use of technology to provide personalized guidance to students based on their needs, rather than a single lesson in a single way.....

2

The criteria of different pedagogical structure and methods can be used to tailor childhood learning skills and personalize learning system....

3

Effectiveness of big data approach creates a tailored learning environment and personalized curriculum for every student, as well as an early warning to identify potential risks ...

4

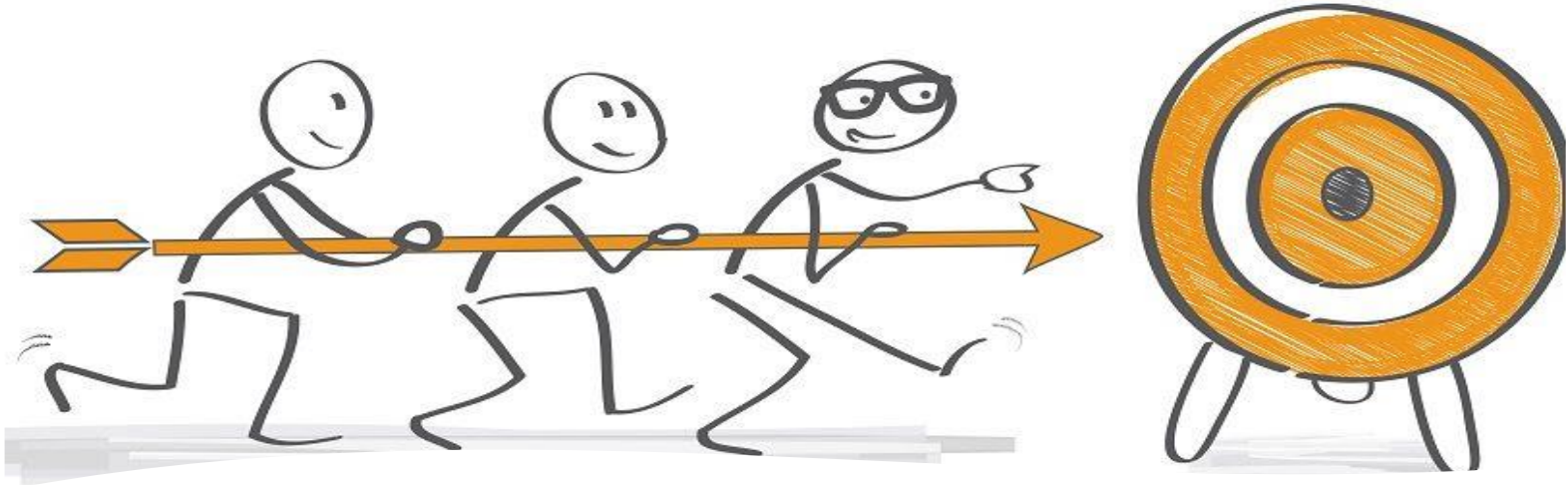
With big data to analyze learning and further improve the way and methods of teaching to further improve student severity....

5

How big data to help educators learn more about childhood potential strength or weaknesses and then pass on information to parents.

Independent	Dependent
•Monitoring method	•Parents& Teachers perspectives
•Pedagogical structure	•Individual skills
•Teaching methodology	•Learning habits
•ECO system	•Level of learning outcomes
	•Measure of learning behavioral

Research Objectives

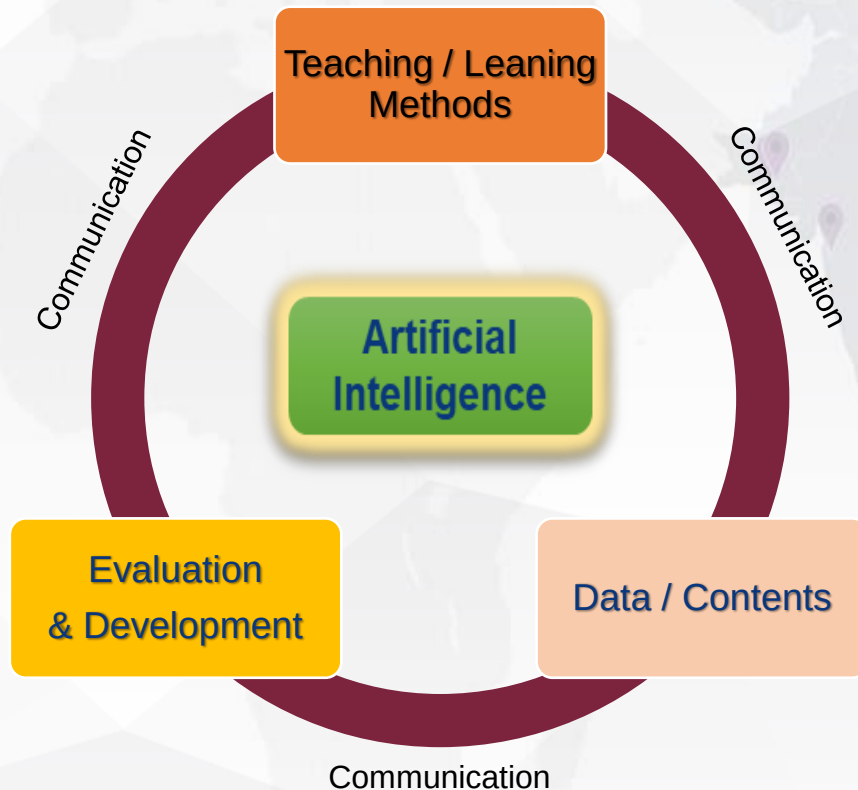


The overall objectives are to examine the dimensions of integrating big data with artificial intelligence technology into childhood education for children conceptual development, different pedagogical and prognostication with future teaching methodology establishment. This has been broken into following agendas:

- Traditional teaching methodology position;
- The trend of big data and AI technology implementation;
- To explore the underlying factors that cause children conceptual development;
- To examine and addressing the ethical issues relating to the child data cycle;
- To identify what potential pedagogical approach, propose and formulate recommendations into childhood education industry within Asia Pacific region
- To determine potential parenthood and educator reaction to various perception of the children benefits

Model Framework

Figure 1: Model Framework



Data / Contents

- Primary and industries
- Geography, demography, background & history;
- Behavioral, health symptoms, socialize characters, reactions, emotional, anomalous data, etc.

Evaluation and Development

- Education of Commissioner (EoC) and Ministry of Education (MOE)
- Learning Management Systems (LMS)
- Education and Youth Policy Analysis Unit in the Education (EACEA)
- Early Childhood Development Agency (ECDA)

Teaching / Learning Methods

- Customize education contents
- Pro-dynamic and Symbolic play
- Communication and creative activities
- Awareness, music & movement program, etc.

Hypothesis

A framework will develop based on our theoretical review, specific hypothesis exploring the relationships of big date dimensions, human behavioral, educator and parenthood perspectives. In addition, recommendations will provide for how to grow further. The specific hypothesis as follow:

In conjunction with



Childhood demographic, is in relative with better learning curve.



Children's physical health during school day (coordination, energy levels, tired, hungry and clumsy) , is in relative with better cognitive skills



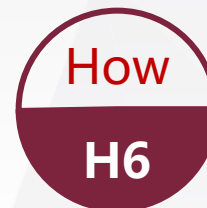
Children human behavioral (aggression, anxiety pro-sociality, concentration and impulsivity), is in relative with better social skill and teacher-child interaction.



Children's study mode (reading, math, words, coloring and writing), is in relative with better cognitive skills

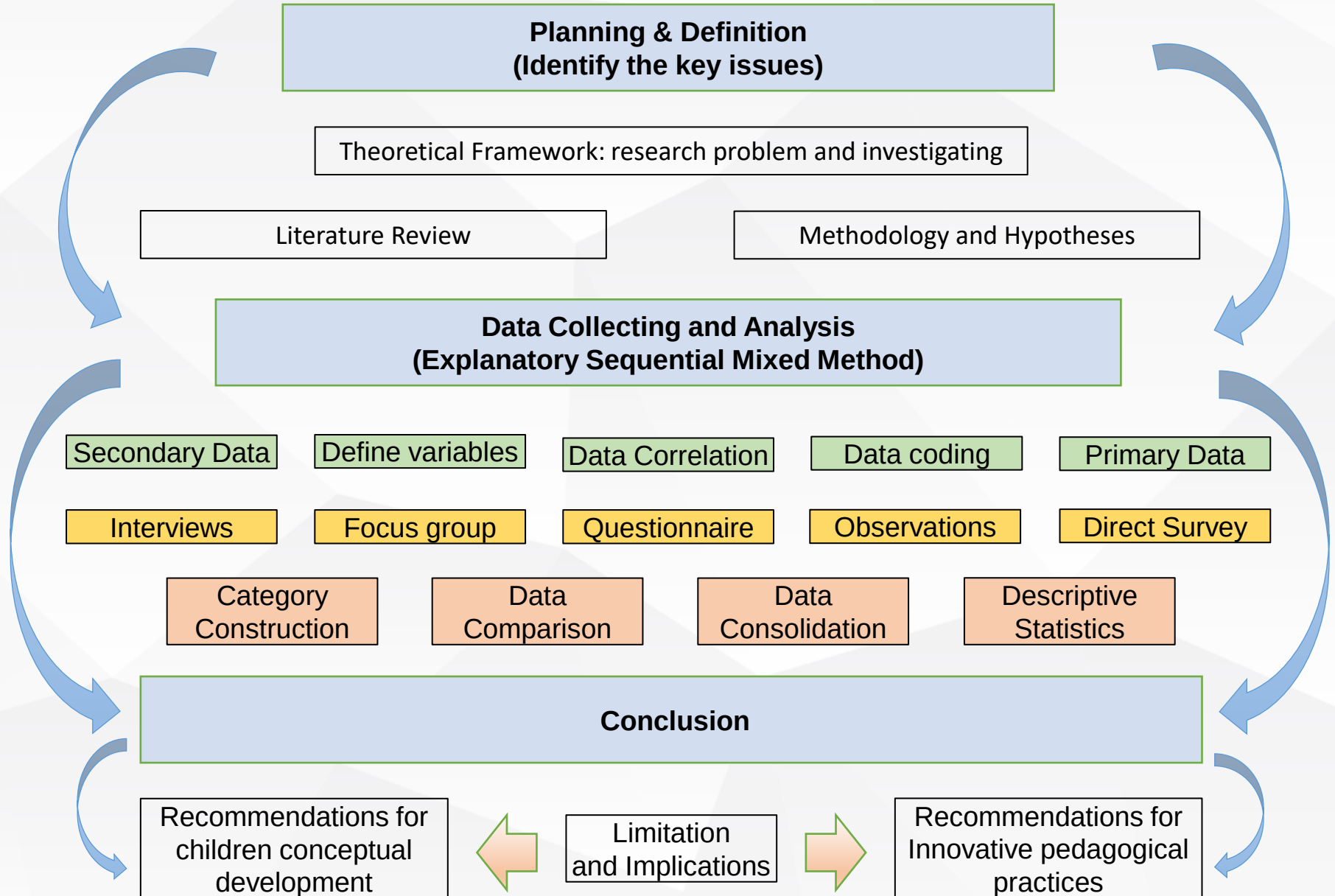


Technical predication, is in relative with better assesses children's ability for parents' direction.

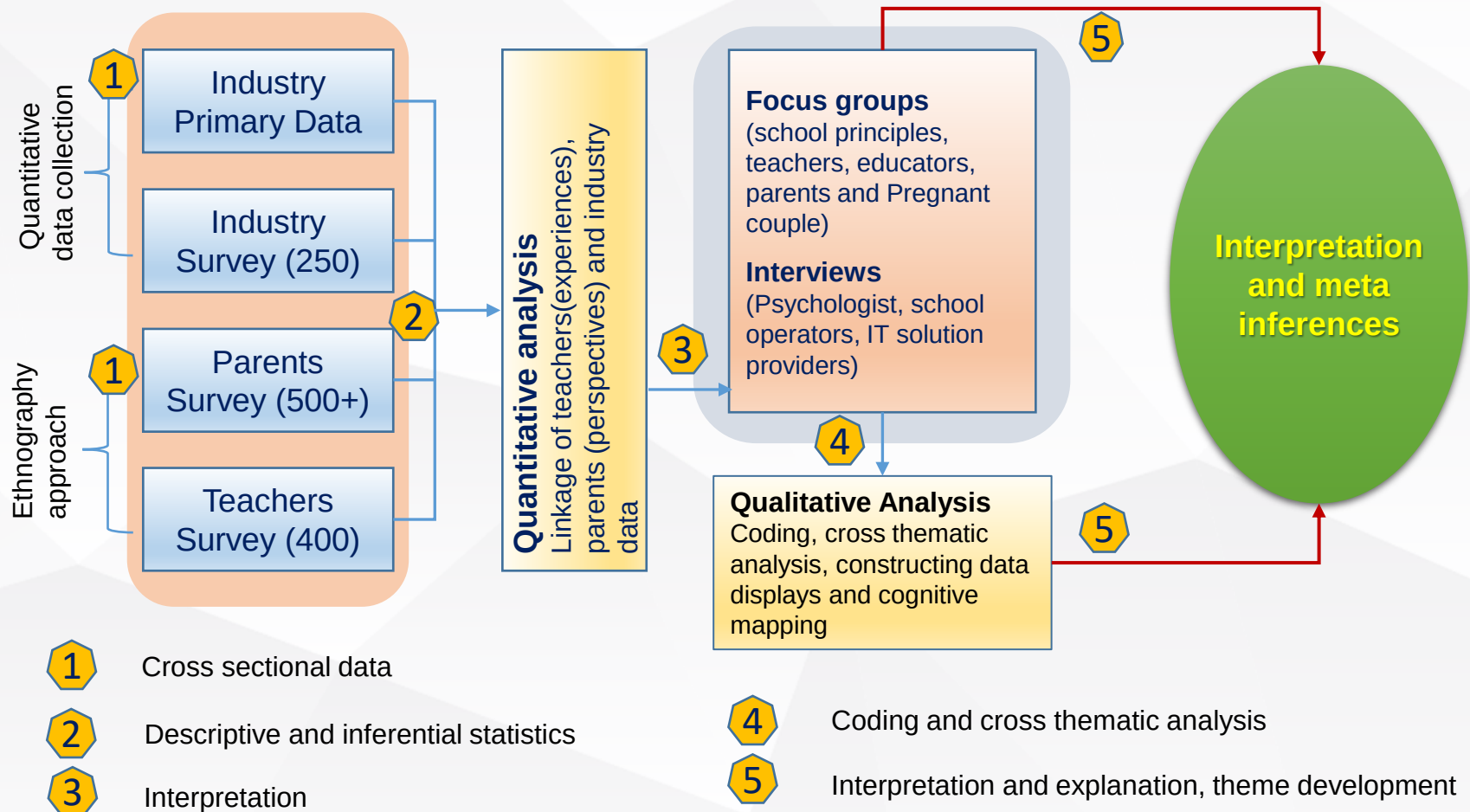


School atmosphere, is in relative with predicting quality and teachers' conversational responsivity

Research Framework



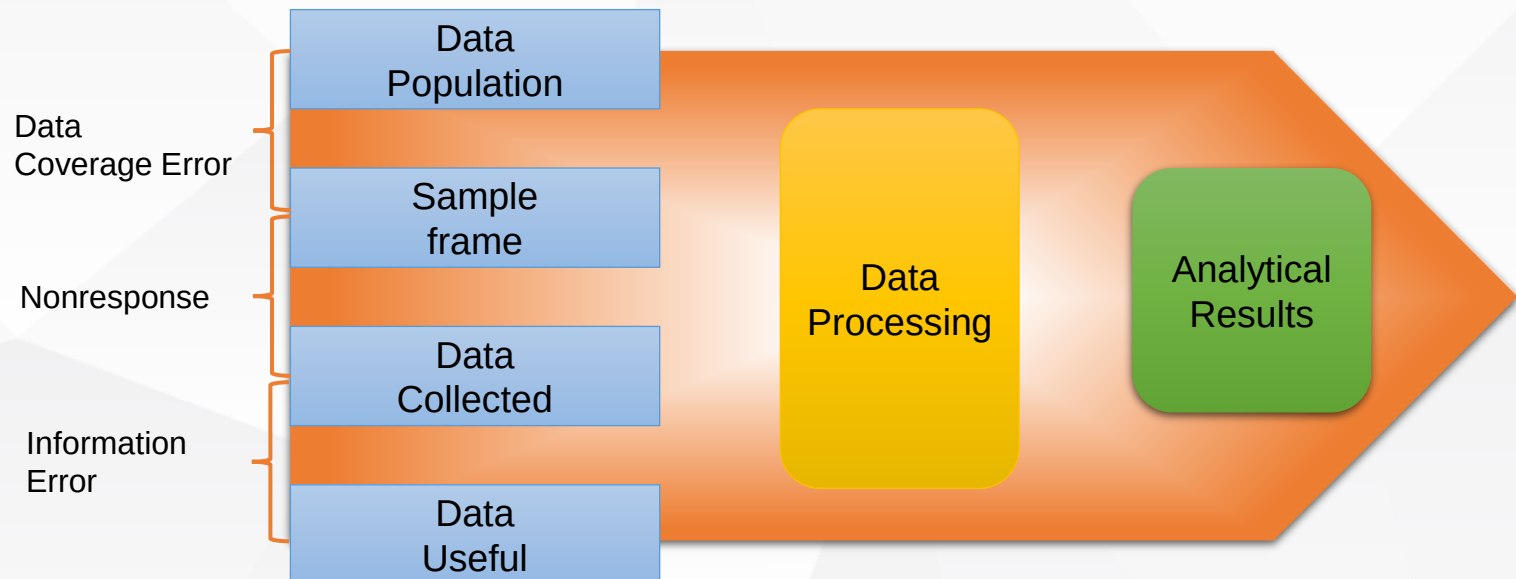
Explanatory Sequential Mixed Method - This method allows researcher combine different research methods to investigate the same phenomenon in a study. Subedi (2016) claimed this research as the third research paradigm can also help bridge the schism between quantitative and qualitative research.



Sample and measures

Data Sampling Frames..... Link (2018) suggested data collecting method is facing the environment rapidly change, researcher should compose a nonprobability samples such as mobile app to capture and measure sample in a quick and economy method;

- Researcher is Chief Operating Officer at SDM Education Group and must enter “PG2/E1 form” for ethical approval;
- Company own 72 childcare center in Singapore, Thailand and Hong Kong and with numbers of affiliate childcare in the region;
- 4,500+ students, 462 teachers, 272 administration staffs and 76 principals (2020);
- Researcher will conduct a survey and questionnaire via school app and PRM portal
 - multiple choice and semantic differential rating scales 1-7



Explanatory Sequential Mixed Method

- Primary historical data from government and regulatory bodies; Secondary data from affiliated organizations;
- Questionnaire survey to
 - SDM's own school via students' app which focus on parents' perspectives (n= 355);
 - Teachers and educators via school PRM portal which focus on the view of educators (n=245);
- Focus group which random select parents, teachers, principle and educators with different nationality and culture (n=43, 6 groups); Structured interviews with different individuals (n=23);
- Descriptive Analysis (Bar, Pie & Histogram) with SPSS

Phase 1 Quantitative			Protocol development	Phase 2 Qualitative		
Data Collection	Data Analysis	Quantitative Results		Data Collection	Data Analysis	Findings and Interpretation
• Industry Data; • Company Data; • Cross-sectional Survey (n=355); • Questionnaire with multiple choice and semantic differential rating scales 1-7 (n=245);	• Define the Mean, Standard deviation; • Error allowance 0.5; • Descriptive Analysis (Bar, Pie & Histogram) with <u>SPSS</u>;	• Identify the degree of acceptance; • Evaluating the correlation with parametric; • Variation in the value of dependent and independent variables;	• Develop qualitative interview questions on the results of quantitative analysis for additional insights; • Propose sampling of focus group participants (43) and interviews (23)	• Direct relative Focus Group (n=43, 6 Groups); • Indirective relative interviews (n=23);	• Thematic Analysis with data coding; • Quasi-experimental Design; • Cognitive mapping;	• Explanation and describe findings; • Embedded results;

Statistical Hypothesis testing

Findings and Recommendations

Findings

The impact of technology on the education industry over last few decades. Heaton (2015) simply defined AI (artificial intelligence) technology is giving many development opportunities for measuring learning process rapidly and based on emotional and instructional interactions as an intelligent analysis of learner's solutions.

- Obtain an insight into the current development of childhood education industry of APEX region
- Efficient development of childhood education in different aspects
- Benefit and have implications for educator who trying to modify the teaching method,
- Assess the effectiveness of the AI with big data solution for performance evaluation.

Recommendations

According the research results and findings, researcher will make suggestions are further proposed as follow;

- After an informational data assessment, researcher will focus on the children conceptual development model;
- Create and compose an intelligent high-quality tutoring system for childhood academic and social-behavioral outcomes.
- Establish and build an **ECO system** with strategic, innovative, systematically, validity and reliability pedagogical structure for child education and predict a personalize life- long learning mode for any individual.



Report and Conclusions

Research on education in childhood particular with differential susceptibility environment, technology and big data has able to provide us with better insight of how's our children growth and learn (Santrock 2011). In this paper, researcher try to summarize in

- An experimental paradigm to testify children's endophenotypes via biological susceptibility such as different environment, genetic, physiological and cognitive.
- Enable us to identify different intervention programs and avoid any unnecessary pressure for children by their parents;
- Reduce industry development barriers to carry out the integrated system with different components that ensure the functioning of pedagogical actions.

Work plan

Work Plan Timetable:

The table below indicates the timeframe for this study. Time is essential; so that I need to conduct the research to match the deadlines requested. Please note that there are few overlapping task with same period.

Week	Activities
1-10	✓ Collecting secondary data from different channels ✓ Reference literature select and review ✓ Coordinate surveys mail-out with company customer relation department and questionnaires development
11-15	✓ Clients' survey complete send out ✓ Qualitative fieldwork & Related literature selection
16-23	✓ Survey returned ✓ Qualitative data analysis transform to electronic file ✓ Face to Face interview developing ✓ Selected participant invitation and scheduling
24-32	✓ Face to Face interviews conducting ✓ Qualitative data will be coded, memoir, sorted and written as relevant to the study ✓ Choose and invite focus group members and conduct meeting session
33-43	✓ Quantitative data will be analyzed ✓ Meeting with in-house and third-party solution provider ✓ Outlining project dissertation structure
44-48	✓ Complete data and literature analysis ✓ Data consolidation & Preparation
49-75	✓ Work on project dissertation ✓ Reviewing
76-80	✓ Complete research study ✓ Submit the final dissertation project

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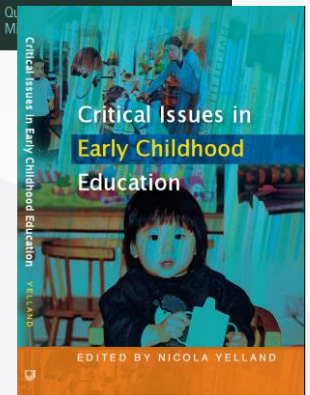
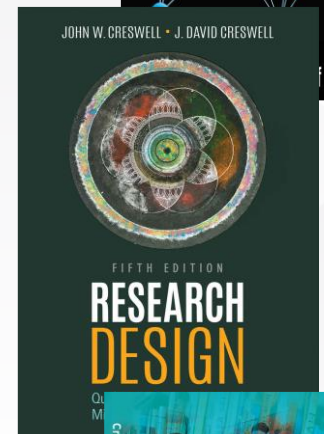
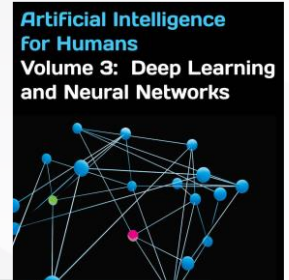
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THANKS

NAME

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