

Education and Career Guidance (ECG) Syllabus Secondary

Implementation starting with
2014 Secondary Cohort (All levels)



Ministry of Education
SINGAPORE

© 2012 Student Development Curriculum Division.
This publication is not for sale. All rights reserved. No part of this
publication may be reproduced without the prior permission of the
Ministry of Education, Singapore.

“Our education system must... nurture Singapore citizens of good character, so that everyone has the moral resolve to withstand an uncertain future, and a strong sense of responsibility to contribute to the success of Singapore and the well-being of fellow Singaporeans.”

Mr Heng Swee Keat, Minister for Education

CONTENTS

Chapter		Page
Introduction	Understanding Education and Career Guidance (ECG)	1
	The ECG Developmental Model	2
	Goals of ECG	3
	ECG and Social and Emotional Competencies	4
	ECG and CCE Learning Outcomes	5
	Components in ECG	6
	Curriculum Time	7
	Guiding Principles in Developing the ECG Syllabus	8
	Guiding Principles in Teaching and Learning of ECG	9
Content	Three Big Ideas in ECG	11
	Key Understandings and Key Questions	13
	ECG Syllabus Content for Secondary Levels	14
Pedagogy		31
Assessment		33
Annexes		35
	<i>Annex A: Social and Emotional (SE) Competencies in the context of ECG</i>	
	<i>Annex B: Critical Briefings by Schools</i>	
	<i>Annex C: ECG Lessons and Interaction Activities in FTGP</i>	
	<i>Annex D: Engaging Parents as Key Partners</i>	
	<i>Annex E: ECG Resources for Schools</i>	
	<i>Annex F: Building ECG Capacity of School Personnel</i>	

Annex G: Child Development Theories and Applications in the ECG Syllabus

Annex H: Mapping of Topics for the ECG Syllabus

Glossary of Terms	57
References	60
Acknowledgements	62

Introduction

Young people in our schools today face a future that will be very different from that experienced by their parents and teachers.

With technological advances, new career opportunities are created rapidly. The jobs of today did not exist ten years ago (Casserly, 2012) and our students will need to be equipped to manage a similar if not more complex future. The average student today can expect to change jobs several times, often in completely different sectors¹. They must expect to experience further periods of learning and updating of their skills on a lifelong basis.

Instead of preparing our students for a “career-for-life”, we need to prepare them for “a lifetime of careers”. Planning that journey should start in lower secondary school at the latest, when students have to choose subject combinations. They need to make choices that reflect their interests and strengths, while making sure they do not close any doors prematurely to possible future pathways.

Students need to learn strategies that will equip them with the skills and knowledge to plan and manage their learning and career pathways in and beyond school, and it is imperative that every school student has access to timely education and career guidance that is future-focused and personalised. This has immediate and long-term benefits for the individual and the nation.

¹ The U.S. Bureau of Labor Statistics reported in 2012 that the average person held 11.3 jobs by age 46. In a 2008 NUS survey of new graduates, 41.3% reported that their current jobs were not directly related to their course of study (Tan, 2011).

Understanding ECG

ECG is about equipping students with the necessary knowledge, skills and values to make decisions at each key education stage for successful transition from school to further education or work, and hence to plan and manage their career pathways and learning throughout their lives.

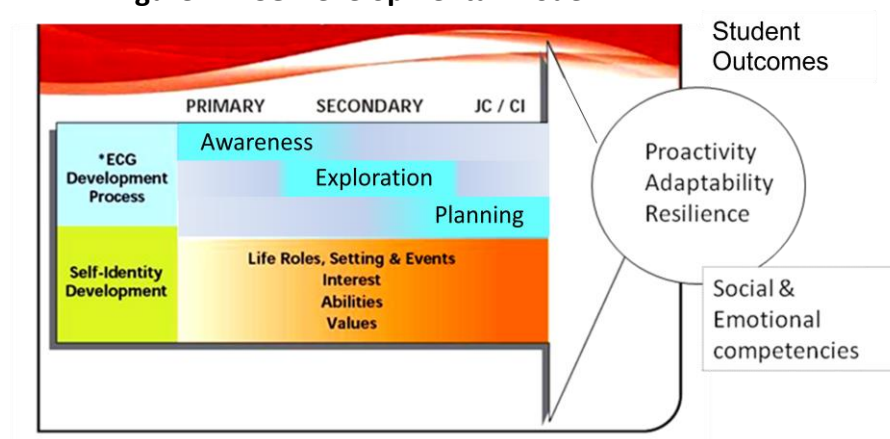
A comprehensive ECG programme can have a positive impact on the quality of students’ educational and career decisions, and also on their education performance and the overall climate of the school (Lapan, Gysbers & Sun, 1997).

ECG is important to prepare our students for the world of work, equip them with the skills to remain competitive in the global economy and above all, to lead meaningful and productive lives.

The ECG Developmental Model

Our approach to ECG is guided by a developmental model:

Figure 1: ECG Developmental Model



The ECG Developmental Model is a framework that guides schools in programming *developmentally appropriate ECG activities* for students at different levels.

The model highlights education and career development as a process that takes place over one's life span, with *three progressive emphases of Awareness, Exploration and Planning*.

Awareness, Exploration and Planning are necessary for all levels of

students. However, there are different emphases at the different levels to meet varying developmental needs.

- a) Primary School Emphasis: Awareness
 - i. Awareness of interests, abilities and career aspirations
 - ii. Relation of self to others and work
 - iii. Initial preferences in occupational roles assumed in play
- b) Secondary School Emphasis: Exploration
 - i. Exploring the world of work
 - ii. Awareness of relevant courses of study and educational pathways
 - iii. Awareness of skills, interests and values
- c) Upper/Post-Secondary Emphasis: Planning
 - i. Clarification of career self-concept
 - ii. Developing skills in gathering information
 - iii. Developing decision-making skills

Foundation to these three phases is the development of one's self-identity. This involves clarification of interests and values, understanding one's strengths, developing abilities, and formulating life roles in the context of one's life experiences.

All these work towards *developing social and emotional competencies and achieving workforce readiness qualities of Proactivity, Adaptability and Resilience as student outcomes*.

Goals of ECG

The goals of ECG are to:

1. Nurture students' *self awareness, self-directedness* and *life skills* for continuous learning and training;
2. Enable students to *explore* viable education and career *options through the provision of accurate and comprehensive information*;
3. Inculcate an *appreciation for the value of all occupations* and how they contribute to the well- functioning of society;
4. Equip students with *skills and means* to *positively engage* their parents and other *career influencers*.

ECG and Social and Emotional Competencies

Social and emotional learning (SEL) is the acquisition of skills needed to recognise and manage emotions, develop care and concern for others, make responsible decisions, establish positive relationships and handle challenging situations effectively².

ECG serves as a vehicle for students to develop their social and emotional competencies in all the 5 domains of SEL – *self-awareness, self-management, social awareness, relationship management* and *responsible decision-making*. For example, as students go through lessons and activities to determine their personal strengths, interests and values, they develop greater self-awareness and more accurate self-perception. Similarly, as they explore various education and career options available, their responsible decision-making skills are honed as they identify and analyze their current situation, evaluate and reflect on possibilities before making plans towards achieving their goals (see *Annex A* for a listing of SE competencies in the context of ECG).

² CASEL: Collaborative for Academic, Social and Emotional Learning

ECG also contributes to the shaping of the 21st century competencies (21st CC) that are necessary to help students be ready for the global future.

Figure 2: 21st Century Competencies & Desired Student Outcomes



All these work towards the four desired 21st CC student outcomes of a *Confident Person, Self-directed Learner, Concerned Citizen* and *Active Contributor*.

ECG and CCE Learning Outcomes

The ECG module contributes to three Character & Citizenship Education (CCE) Learning Outcomes:

LO 1 Acquire self-awareness and apply self-management skills to achieve personal well-being and effectiveness

By the end of this module, students will be able to:

1. Identify their career interests, work skills, work values and life goals
2. Apply knowledge of personal interests, abilities, and values to planning and decision-making in choosing post-secondary education and career options
3. Understand the gap between current realities and future aspirations, and take action to address the gap
4. Develop goals for their aspired educational pathways and tentative career options

LO 2 Act with integrity and make responsible decisions that uphold moral principles

By the end of this module, students will be able to:

1. Understand the career planning process and apply decision-making skills to educational and career planning
2. Articulate a short term and long term education and career plan
3. Evaluate the impact and consequences of one's decision on self and others

LO 4 Be resilient and have the ability to turn challenges into opportunities

By the end of this module, students will be able to:

1. Appreciate the need for continual improvement and lifelong learning in their efforts to achieve academic and career goals
2. Apply flexibility and utilise available resources to bring themselves closer to their academic and career-life goals
3. Have confidence in their ability to pursue their life goals

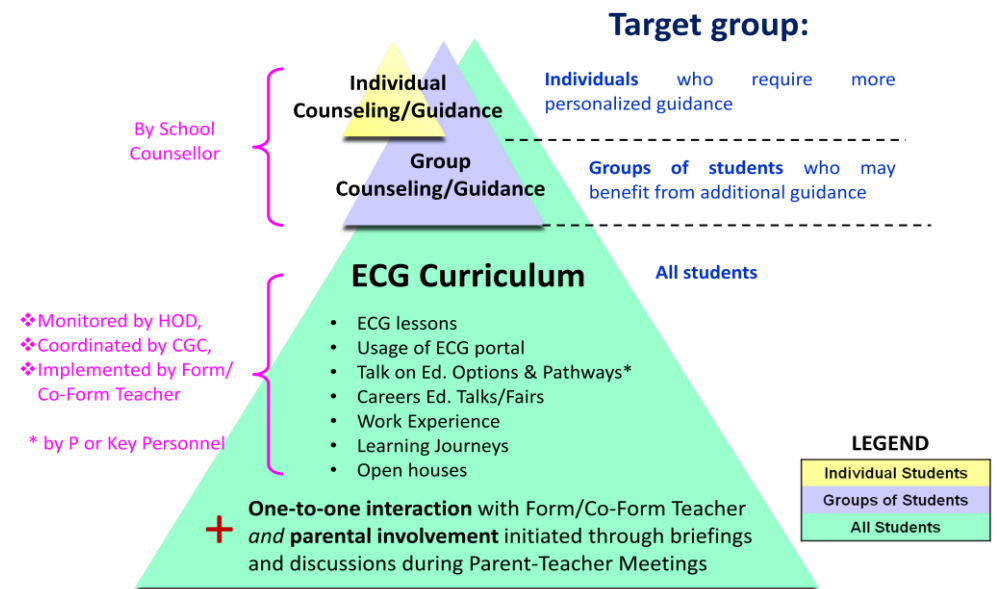
Components in ECG

Besides classroom learning, schools will continue with the tiered structure of support to ensure good implementation of the total curriculum for ECG (Figure 3). This is in line with ECG practices in comprehensive guidance programmes, where ECG is delivered through the 3 pillars (Howard & Ill, 2004) of *classroom* learning, *guidance* and *counselling*, and *community* experiences.

1. **ECG Curriculum.** The curriculum comes under the purview of the HOD/CCE or equivalent. It is coordinated by the Career Guidance Coordinators (CGC) and implemented by teachers. Besides the ECG lessons and portal implementation, school leaders or their designates should also conduct briefing sessions for students and/or parents on education options at the relevant levels of study (Annex B).
2. **Community Experiences.** Schools can leverage on their partnership network to organise cohort-level activities such as education/career talks and visits to industry or post-sec institutions for a more holistic experience. Schools may also wish to institute work experience and work shadowing programmes, especially for older students.
3. **Counselling Support.** Schools provide individual counselling or group guidance for students who require more targeted support

or are more at risk³. This is under the purview of the school counsellors.

Figure 3: Tiered Structure of ECG Delivery Model



³ Some students are at risk of falling behind in their studies or becoming early school dropouts when they are faced with early academic failure coupled with a lack of direction for life goals.

Curriculum Time

Primary Schools

ECG lessons for Primary 3 to 6 levels have been incorporated into the Form-Teacher Guidance Period (FTGP) package and made available to schools in March 2012. These lessons are designed to raise pupils' self-awareness of their strengths and interests, help them plan their educational pathway and selection of secondary schools, open up their horizon to occupations and nurture their aspirations for the future.

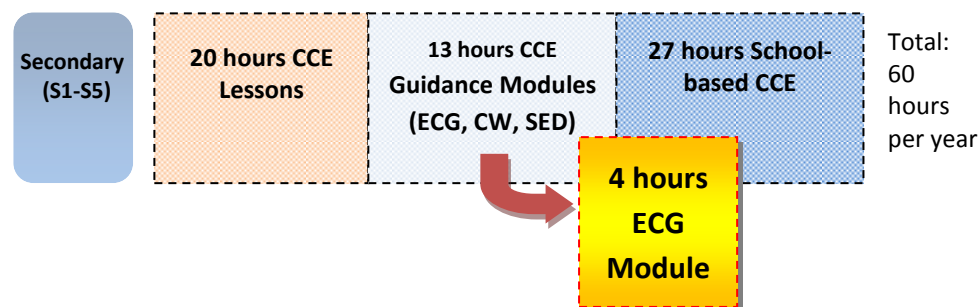
Levels	Total number of periods (30 mins) allocated for ECG in FTGP
Primary 3 & 4	10
Primary 5 & 6	12
Total	22

See *Annex C* for a list of ECG lessons and interaction activities in FTGP.

Secondary Schools

The positioning of the ECG Syllabus (Secondary) in the CCE Curriculum is as follows:

Figure 4: Curriculum Time for ECG



A total of 4 hours per level per year will be allocated for the explicit delivery of the lessons. Lessons will be planned for 60 minutes, as time is required for effective delivery of the lessons using facilitation. However, there will be a clear segmentation of the lesson into two parts for schools that prefer to deliver the lesson over two 30-minute periods.

Guiding Principles in Developing the ECG Syllabus

The ECG syllabus was designed with the following considerations:

1. Alignment with Wider MOE Policies

Lessons are mapped to the CCE learning outcomes (LOs) and referenced to 21CC, C2015 Student Outcomes and Social and Emotional Learning (SEL) Goals, Standards and Benchmarks. Specifically, lessons contribute to three CCE LOs:

- LO 1: Acquire self-awareness and apply self-management skills to achieve personal well-being and effectiveness*
- LO 2: Act with integrity and make responsible decisions that uphold moral principles*
- LO 4: Be resilient and have the ability to turn challenges into opportunities*

2. Meeting Students' Developmental Needs

The ECG syllabus is based on the ECG developmental model, with emphasis on *Awareness* and *Exploration* in Lower Secondary, and *Planning* in Upper Secondary.

3. Provision of Meaningful and Relevant Learning Contexts

Research (Perry, Liu & Pabian, 2010) indicates that when students see relevance between their studies and future career aspirations, they tend to display greater engagement and motivation in school. The ECG lessons will provide students with opportunities to explore and investigate various industries, jobs and possible further

education options and enable them to see relevance between their studies and aspirations. This will heighten learning motivation and engagement.

4. Designing a Curriculum That Enables Effective Learning

ECG is about imparting life skills that prepare students to be lifelong learners, ready for the world of work and life. The curriculum will enable our students to transfer their learning in the application of values, skills and attitudes to different settings in life. As such, Understanding by Design⁴ (UbD) is adopted to facilitate this.

5. Engaging Parents as Key Partners

While schools play a pivotal role in helping students raise their self-awareness and identifying their career aspirations, parents, being significant adults in the lives of their children, also need to be educated to ensure that they are able to guide their child through the education and career decision-making processes (*Annex D*). As such, lessons will be written to include parental involvement.

⁴ Developed by Grant Wiggins and Jay McTighe (2005), UbD is a way of thinking about learning, assessment and teaching that puts the student at the centre of the learning process.

Guiding Principles for Teaching and Learning of ECG

1. Conducive environment

Students must be able to trust and feel safe with the person whom they share their personal aspirations and concerns with. Teachers may create such an environment for the facilitation of ECG using the acronym **PLEASE** as a guide:

- | | |
|--------------------|--|
| Protect | • Provide a safe and secure environment |
| Listen | • Take the time to hear what students have to say |
| Enquire | • Express interest and ask for clarification |
| Acknowledge | • Show that you are listening |
| Support | • Provide praise and specific feedback |
| Exchange | • Share stories that can serve as positive examples/role models for students |

Communicative language is an **ART**. This is a magic word of communication where **A**: Acceptance, **R**: Respect and **T**: Trust.

2. Learner-centredness

Enable students to participate actively through differentiated teaching approaches and materials, and task-based activities. Plan activities around the different interests of the students and design lessons to tap on students' prior knowledge. To promote active learning, opportunities for reflection, enquiry and question of

assumptions, ideas and norms about career options and education pathways should be incorporated.

3. Contextualisation

Students' learning experiences should be shaped to make connections between ECG lessons and their other school activities. It is also important to engineer success so that students have the confidence to do things and expect positive results when they act on something. This will help build their self belief which is an important influencer on a child's education and career decisions⁵.

4. Preparing students for citizenry - Values as core

Beyond knowledge and skills, students need to recognise that all honest work is a contribution to society. This involves students acquiring values such as respect, responsibility, resilience and integrity which adults in the school environment can role model. Particular attention should be placed on utilizing social and emotional (SE) competencies as enablers to help develop these values.

⁵The Social Cognitive Career Theory (Lent, Brown & Hackett, 1994) posits that career interests are regulated by self-efficacy and an outcome expectation, which means people will form lasting interests in activities when they experience personal competency and positive outcomes. Conversely, a false belief or perception of low personal competency may lead people to avoid acting on their goals.

5. Spiral Progression

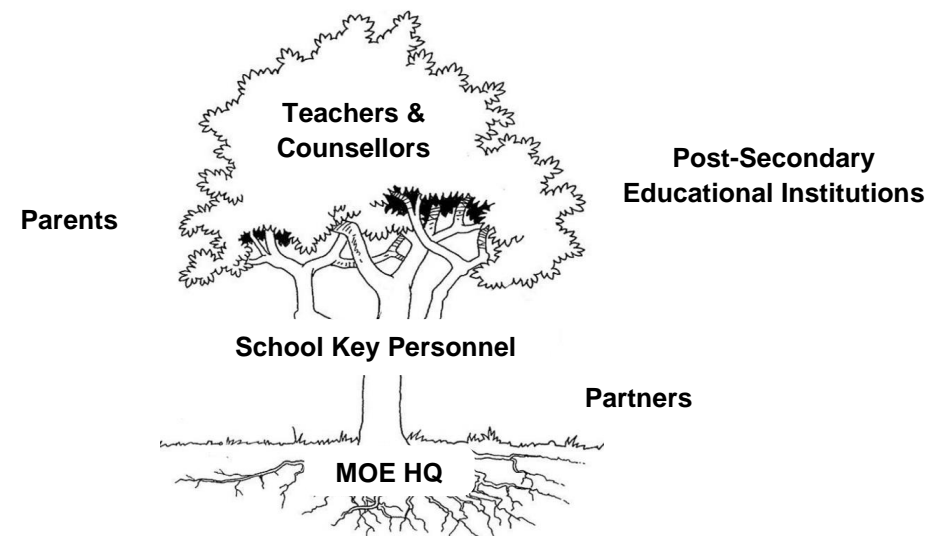
As ECG is a developmental process, each lesson builds upon the content covered in the previous lesson⁶. Foundational to ECG is the concept of self-identity. Allow students to expand their understanding of self in the context of possible educational and career options by further developing the concepts of identity, choices and relationships.

6. Many Helping Hands

An African proverb goes *“It takes the whole village to raise a child”*, and so it is that many parties are involved to ensure that a child is able to have an effective ECG experience.

⁶Jerome Bruner’s model of spiral curriculum (1966) suggests that students should continually return to basic ideas and concepts are added over the course of a curriculum. This is done in order to solidify understanding over periodic intervals. Over the course of development, behaviours and pieces of knowledge are reinforced by outcomes, and Bruner’s model seeks to match that learning process in the classroom.

Figure 5: The Different Groups of Stakeholders in ECG



Schools should explore how they can effectively tap on all available resources to enhance their students’ learning experiences (*Annex E & Annex F*). Ultimately, no one has full knowledge of the external environment and the whole context and full potential of any individual student. Teachers should be mindful not to advise students based solely on their own experience, perceptions or knowledge. Teachers have an ethical responsibility to point students to accurate sources of information.

Three BIG Ideas in ECG

The use of Big Ideas, Themes and ECG questions (*Table 1*) thread students' learning across Secondary 1 to 5.

Table 1: Big Ideas, Themes, ECG Questions

3 Big Ideas	4 Themes	3 ECG Questions
Identity Choices Relationships	<ul style="list-style-type: none"> Self-Awareness and Self-Management Awareness of Relational Support and Decision Influencers Exploring the Education Landscape and Planning Pathways Career Sectors Exploration 	<p>Who am I?</p> <p>Where am I going?</p> <p>How do I get there?</p>

The three big ideas of *Identity*, *Choices* and *Relationships* are in alignment with the big ideas of CCE and predicated on developmental theories (*Annex G*):

1. **Identity:** Developing one's self-identity is foundational to the educational and career planning process. Being able to answer the question, "Who Am I?", would allow students to decide on

how best to move forward since career interest is an expression of one's personality (Super⁷, 1969; Holland⁸, 1959, 1985). Teens are seeking to develop their self-identity (Erikson⁹, 1950) and this is an opportune time for them to explore their personality traits, interests, values, strengths and areas for growth (Marcia¹⁰, 1966, 1980). Providing learning experiences and the use of profiling tools to help students discover more about their identity would be relevant for teens during this stage of their development.

⁷Super's *Self-Concept Theory* hypothesizes how a person, consciously or unconsciously, defines oneself in terms of self-concept, which predisposes one to seek that type of career choice.

⁸Holland's *Theory of vocational choice* states that individuals select a career similar to their type of personality fit. As such, students will have the opportunities to explore how their personality type and abilities relate to their career interests.

⁹Erikson's *Theory of psychosocial development* explains that adolescents explore their independence and self-identity and develop a sense of self. This information is valuable to students at a time when their education and career options are developing.

¹⁰Marcia's *Identity Status Theory* posits that a well-developed identity gives one a sense of one's strengths, weaknesses, and individual uniqueness. This information provides background for education and career exploration and planning.

2. **Choices:** Students (and their parents) need to make important choices regarding educational options. Such decisions could potentially influence and impact on students' future career paths. Research indicates that individual characteristics, environmental factors and learning experiences shape such a decision-making process (Krumboltz¹¹, 1979). Choices may also be influenced by gender stereotypes or prestige levels of education and work (Gottfredson¹², 1981).

3. **Relationships:** Recognising that relationships with significant others provide relational support and also influence an individual's choice-making (Bronfenbrenner¹³, 1979), opportunities for students to acquire skills that will enable them to engage in discussions with their significant adults will be built into the curriculum. This will allow for students to engage their parents in conversations about their aspirations, and provide an avenue for parents to participate in their child's educational planning.

For each big idea, *Key Questions* have been identified for teachers to guide students' inquiry and facilitate the uncovering of *Key Understandings*. These understandings serve as insights to the big ideas. They are transferable to new situations and have a lasting value beyond the classroom. As the lessons are developmental and progressive in nature, these big ideas and key understandings will be re-visited at various points throughout the course. *Annex H* shows a mapping of topics across the levels.

Each theme covers specific content and is designed to help students achieve a set of learning outcomes by the end of the course. Three *ECG Questions* aligned with the ECG developmental phases serve as focal points of the syllabus to connect the discrete knowledge, skills and attitudes/values taught.

¹¹Krumboltz emphasizes the role of learning experiences and modelling in reinforcing and influencing behaviours. Since a student's career interests and choices are shaped by learning/life experiences, it is important to expose students to a wide array of education and career-related experiences to expand the potential interest, e.g. attachment to industries and educational institutions.

¹²Gottfredson describes how career choices develop in young people. She posits that individuals draw boundaries and limit themselves to certain educational pathways or careers, based on gender-roles and social status, and may compromise by foregoing their interests or passion instead.

¹³Bronfenbrenner's *Ecological Model* states that individuals should be understood in the contexts of their environments and that the eco-systems surrounding an individual will have an influence on the individual.

Key Understandings and Key Questions

The following table encapsulates the overarching Key Understandings and Key Questions:

Table 2: Big Ideas, Overarching Key Understandings and Questions

	Big Idea 1: Identity	Big Idea 2: Choices	Big Idea 3: Relationships
Overarching Key Understandings	<ul style="list-style-type: none">▪ Identity is complex▪ Identity shapes perceptions and relationships▪ Identity evolves	<ul style="list-style-type: none">▪ Choices change lives▪ Choices generate consequences▪ Choices are contextualized▪ Choices may cause conflict	<ul style="list-style-type: none">▪ Relationships are underpinned by structures▪ Relationships are about connections▪ Relationships require negotiation▪ Relationships can grow or stunt you▪ Relationships are a core part of life
Overarching Key Questions	<ul style="list-style-type: none">• Who am I?• Why is identity important?• How do I view people and the world around me?	<ul style="list-style-type: none">• What makes a choice good or bad?• Why do people need to make choices?• Why are some choices more difficult than others?	<ul style="list-style-type: none">• What are relationships?• How are relationships formed?• Why are relationships important?• How are people related to each other?

Education and Career Guidance (ECG) Syllabus Content for Secondary Levels

This module aims to raise awareness in students about the skills, knowledge and attitudes that will be required to make successful transitions from school to further study and work. This will allow students to examine and identify their skills and talents, and students will be encouraged to explore the different education opportunities and career pathways. Students will also be more aware of decision support from significant others as well as decision influencers. They will broaden their horizons about the occupational landscape.

Theme 1: Self-Awareness and Self-Management

This theme focuses on the development of self-awareness and self-management. Students will gain greater clarity regarding their interests and values, identify the gaps between their current strengths and abilities in relation to their future aspirations, and start to make plans to develop their personal, learning and career goals.

Topics Content	Knowledge	Skills	Values / Attitudes
Lower Secondary 1. Who am I? 2. Knowing my career personality type (RIASEC code) 3. Goal setting 4. Decision making	Students will be able to: <ul style="list-style-type: none">Identify interests, abilities, strengths, skills, talents and motivations, and assess how they are reflected in career decision-making and educational advancement	Students will be able to: <ul style="list-style-type: none">Identify career personality type and evaluate how it is reflected in career decision-making and educational advancementCompose short-term personal, educational and professional goals based on career assessment results	Students will develop: <u>Values</u> <ul style="list-style-type: none">Responsibility in making decisionsRespect for self

Topics Content	Knowledge	Skills	Values / Attitudes
<p><i>This may include:</i></p> <ul style="list-style-type: none"> a. Components of self-identity <ul style="list-style-type: none"> • Identifying personal values, interests, personality, strengths • Profiling of career interests, work skills and work values a. Strategies used to build motivation and support education and career planning, e.g. Goal-setting skills b. The importance of early planning <ul style="list-style-type: none"> • Maintaining a career portfolio 	<ul style="list-style-type: none"> • Understand how one's interests, knowledge, skills, attitudes and values can be transferable to various education choices and work roles • Understand how to develop their capabilities and interests 	<ul style="list-style-type: none"> • Demonstrate behaviours that reflect a positive attitude about themselves (e.g. come up with alternative plans should their Plan A not work) • Demonstrate general employability skills and personal qualities needed to be successful in school and employment • Develop and maintain a career portfolio to demonstrate academic preparation, skills and competencies leading to post-secondary education and employment 	<p><u>Attitudes</u></p> <ul style="list-style-type: none"> • Acceptance and valuing the idea that each individual is different • Belief in one's competence • Courage to face challenges and changes • Humility when receiving and giving feedback • Humility and courage to ask for help when necessary

Topics Content	Knowledge	Skills	Values / Attitudes
Upper Secondary 1. Who am I? 2. Career interest profiling 3. Work skills 4. Work values 5. My hopes and aspirations 6. Information-interview skills; Resume writing; Interview skills <i>This may include:</i> a. Understanding change in one's self b. Employability skills and values <ul style="list-style-type: none"> Identifying and clarifying work skills and work values c. Developing an education and career development plan	Students will be able to: <ul style="list-style-type: none"> Understand that change is a part of growth Understand that one's motivations and aspirations will change as one goes through physical and psychological changes Understand how one's interests, knowledge, skills, attitudes and values can be transferable to various education choices and work roles Examine personal characteristics and values related to work, and integrate a broad range of career interests in career decision-making and educational advancement 	Students will be able to: <ul style="list-style-type: none"> Assess abilities, strengths, interests, skills and talents, and work towards bridging gaps between reality and aspirations Establish short-term goals to work towards their aspired educational pathways and tentative career options Demonstrate behaviours that reflect a positive attitude about oneself (e.g. come up with alternative plans should their Plan A not work) Demonstrate proficiency in workplace readiness skills by refining and upgrading portfolio materials and including exhibits of proficiency Articulate their post-secondary education and career plan 	Students will develop: <u>Values</u> <ul style="list-style-type: none"> Responsibility in making decisions Respect for self <u>Attitudes</u> <ul style="list-style-type: none"> Acceptance and valuing the idea that each individual is different Belief in one's competence Courage to face challenges and changes Humility when receiving and giving feedback Humility and courage to ask for help when necessary Pro-activeness in keeping oneself informed

The following are possible students' life experiences which can be used as contexts for the application of the relevant knowledge, skills and values/ attitudes:	
Possible Contexts for Lower Secondary	Possible Contexts for Upper Secondary
<ul style="list-style-type: none"> • Adjusting to Secondary school • Settling into a new class • Managing new subjects • Preparing for and taking tests and examinations • Choosing a subject combination • Preparing for and participating in camps • Participating in Values in action (VIA), e.g. Students helping out in an elderly care centre may find that they are passionate about working with the elderly and hence aspire to enter an occupation working with geriatrics • Choosing a CCA 	<ul style="list-style-type: none"> • Settling into a new class • Managing new subjects • Preparing for and taking national examinations • Thinking about post-secondary life • Coping with setbacks • Planning a career • Preparing for and participating in camps • Participating in VIA • Leading a CCA

Theme 2: Awareness of Relational Support and Decision Influencers

This theme focuses on creating in students an understanding of the support systems they can tap on, and the personal and environmental factors which may influence their educational and career choices. Students, equipped with awareness and strategies to negotiate potential barriers to education and work, will be able to make more informed decisions, better manage the underlying factors, apply flexibility and utilise available resources to bring themselves closer to their academic and career-life goals.

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
Lower Secondary <ol style="list-style-type: none"> Examining influences in decision-making The future world of work Education landscape 1 Education landscape 2 <p><i>This may include:</i></p> <ol style="list-style-type: none"> Sources of relational support <ul style="list-style-type: none"> Identifying their support system, i.e. who do they consult when they need advice 	Students will be able to: <ul style="list-style-type: none"> See the relevance between the role of learning in one's career and life Understand that one's education and career paths reflect a series of choices Appreciate the need for continual improvement and lifelong learning in their efforts to achieve academic and career goals 	Students will be able to: <ul style="list-style-type: none"> Know how to use school and community (family, significant adults etc) resources to gather relevant information that will help shape decisions Positively engage parents and other career influencers in conversations on education and career options Know how to manage conflict through effective communication 	Students will develop: <p><u>Values</u></p> <ul style="list-style-type: none"> Resilience as demonstrated through the will to pursue aspirations even if it is through less common pathways Responsibility in making decisions

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
<p>b. Circles of Influence</p> <ul style="list-style-type: none"> Examining how they may be influenced by their family members and other significant adults or gender stereotypes <p>c. Profiling of interests, skills and values</p> <ul style="list-style-type: none"> Matching individual career interests to occupations Identifying occupations to explore 		<ul style="list-style-type: none"> Determine the value and importance of certain education decisions for themselves Apply decision making skills to education and career planning Evaluate the longer term effects of the decisions on one's future 	<p><u>Attitudes</u></p> <ul style="list-style-type: none"> Appreciation of individual differences Valuing alternative points of view Belief in one's competence Courage to face challenges and changes Pro-activeness in keeping oneself informed Confidence in their ability to achieve their life goals Passion to continue learning and striving for higher standards

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
Upper Secondary 1. My hopes and aspirations 2. The changing occupational landscape 3. Education landscape 3 4. Education landscape 4	Students will be able to: <ul style="list-style-type: none"> • See the relevance between the role of learning in one's career and life • Understand that one's education and career paths reflect a series of choices 	Students will be able to: <ul style="list-style-type: none"> • Develop strategies to overcome possible problems and obstacles blocking their goals • Positively engage parents and other career influencers in conversations on education and career options 	Students will develop: <u>Values</u> <ul style="list-style-type: none"> • Resilience as demonstrated through the will to pursue aspirations even if it is through less common pathways • Responsibility in making decisions

<p><u>Topics</u> Content</p>	<p>Knowledge</p>	<p>Skills</p>	<p>Values / Attitudes</p>
<p><i>This may include:</i></p> <p>a. Skill-sets valued globally</p> <ul style="list-style-type: none"> Identifying transferable skills e.g. utilising computer software, good written and communication skills etc. Identifying enterprise skills e.g. problem-solving, creativity, resourcefulness, assertiveness, etc. <p>b. Barriers to work</p> <ul style="list-style-type: none"> Life-role changes over time Traditional and non-traditional work options Identifying possible alternative plans using 'Plan A / Plan B' action planning 	<ul style="list-style-type: none"> Be aware of the possible problems and obstacles towards attaining their goals Appreciate the need for continual improvement and lifelong learning in their efforts to achieve academic and career goals Demonstrate knowledge about the changing workplace Understand how changing economic and societal needs influence employment trends and future training Understand that work is an important and satisfying means of personal expression 	<ul style="list-style-type: none"> Determine the value and importance of certain education and career decisions for themselves Evaluate the impact and consequences of one's decision on self and others Know how to manage conflict through effective communication Identify alternative ways of achieving goals Communicate effectively in portfolios, applications, CVs and face-to-face interactions 	<p><u>Attitudes</u></p> <ul style="list-style-type: none"> Appreciation of individual differences Valuing alternative points of view Belief in one's competence Courage to face challenges and changes Pro-activeness in keeping oneself informed Confidence in their ability to achieve their life goals Passion to continue learning and striving for higher standards

The following are possible students' life experiences which can be used as contexts for the application of the relevant knowledge, skills and values/ attitudes:	
Possible Contexts for Lower Secondary	Possible Contexts for Upper Secondary
<ul style="list-style-type: none"> • Communicating with parents • Communicating with teachers and peers • Making decisions with parents • Choosing a subject combination • Experiencing peer pressure • Doing project work • Having team discussions 	<ul style="list-style-type: none"> • Communicating with parents • Communicating with teachers and peers • Making decisions with parents • Experiencing peer pressure • Helping friends to cope with stress and setbacks • Attending briefings on education pathways • Participating in education and career fairs • Participating in open houses

Theme 3: Exploring the Education Landscape and Planning Pathways

This theme focuses on the exploration of the diverse pathways available in our education landscape. Students (and their parents) will be pointed to accurate sources of information regarding their options to help them gain a better understanding of the relevant courses of study available. The concept of “行行出状元” (*hang hang chu zhuang yuan*) – that all roads can lead to success, will be reinforced and the importance of life-long learning underscored.

Students should draw on their understanding of self, synthesise information gathered and relate schooling to the different education and career pathways so as to make sound educational and career decisions.

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
Lower Secondary 1. Education landscape 1 2. Education landscape 2 <i>This may include:</i> a. Understanding the different educational pathways and options available, e.g. Elective Modules (EM), Advanced Elective Modules (AEM), Direct School Admission (DSA), Polytechnic Foundation Programme (PFP), Direct Entry Scheme (DES), etc.	Students will be able to: <ul style="list-style-type: none"> • Demonstrate awareness of the education and training needed to achieve career goals • Appreciate how their interests, learning styles knowledge, skills, attitudes and values can mean that different education options may better fit their needs 	Students will be able to: <ul style="list-style-type: none"> • Locate information and use it effectively • Select subject combinations or options that are in line with interests and aspirations • Develop skills to locate, evaluate, and interpret information regarding the different educational pathways 	Students will develop: <u>Values</u> <ul style="list-style-type: none"> • Resilience as demonstrated through the will to pursue aspirations even if it is through less common pathways • Responsibility in making decisions

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
<p>b. Understanding considerations when evaluating (Sec 3) subject combinations and their implications</p> <ul style="list-style-type: none"> • Encourage students to have further conversations with their parents • Developing one-year and five-year education plans and monitoring progress toward meeting the goals of each plan 	<ul style="list-style-type: none"> • Understand the realities and requirements of various education, training and work settings • Understand the relationship between educational achievement and career success • Know about learning opportunities and how they will change over time 	<ul style="list-style-type: none"> • Make and review education plans regularly • Shortlist post-secondary options, set short-term goals and monitor their progress toward meeting the goals 	<p><u>Attitudes</u></p> <ul style="list-style-type: none"> • Acceptance and valuing the idea that each individual is different • Belief in one's competence • Courage to face challenges and changes • Flexibility in adapting plans to changing circumstances • Pro-activeness in keeping oneself informed • Confidence in their ability to achieve their life goals • Passion to continue learning and striving for higher standards

<p><u>Topics</u></p> <p>Content</p>	<p>Knowledge</p>	<p>Skills</p>	<p>Values / Attitudes</p>
<p>Upper Secondary</p> <p>1. Education landscape 3 2. Education landscape 4</p> <p><i>This may include:</i></p> <p>a. Understanding the multiple education pathways available and exploring the various Post-Secondary Education Institutions (PSEIs) further</p> <p>b. Identifying the different sources of possible financial support, e.g. scholarships, bursaries, CPF schemes, etc.</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Demonstrate awareness of the education and training needed to achieve career goals • Appreciate how their interests, learning styles knowledge, skills, attitudes and values can mean that different education options may better fit their needs • Understand the relationship between educational achievement and career success • Identify the sources of financial funding available for continuing education • Know about learning opportunities and how they will change over time 	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Locate information and use it effectively • Make life and education/career-enhancing decisions • Articulate their post-secondary education and career plan based on a sequence of career pathway courses and related post-secondary options • Assess and modify their educational and career plan where necessary 	<p>Students will develop:</p> <p><u>Values</u></p> <ul style="list-style-type: none"> • Resilience as demonstrated through the will to pursue aspirations even if it is through less common pathways • Responsibility in making decisions <p><u>Attitudes</u></p> <ul style="list-style-type: none"> • Acceptance and valuing the idea that each individual is different • Belief in one's competence • Courage to face challenges and changes • Flexibility in adapting plans to changing circumstances • Pro-activeness in keeping oneself informed • Confidence in their ability to achieve their life goals • Passion to continue learning and striving for higher standards

The following are possible students' life experiences which can be used as contexts for the application of the relevant knowledge, skills and values/ attitudes:	
Possible Contexts for Lower Secondary	Possible Contexts for Upper Secondary
<ul style="list-style-type: none"> • Helping friends to cope with stress and setbacks • Dealing with personal setbacks and stress • Attending briefings on education pathways • Choosing a subject combination 	<ul style="list-style-type: none"> • Helping friends to cope with stress and setbacks • Dealing with personal setbacks and stress • Attending briefings on education pathways • Participating in education and career fairs • Participating in open houses • Planning a personalised career plan

Theme 4: Career Sectors Exploration

This theme focuses on introducing to students the wide array of occupations, including future occupational trends and new jobs created in the fast-changing global economy. Students will learn about the range of jobs in the various industries, including less commonly-discussed occupations, and become aware of the related skills and values more suited to particular industries. In so-doing, they will have the opportunity to clarify their career self-concept.

Students should understand that accurate current and unbiased career information is necessary for successful career planning and management.

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
Lower Secondary 1. Career sectors exploration 1 2. Career sectors exploration 2 3. Career sectors exploration 3 <i>This may include:</i> a. Comparing the careers in the different career sectors and how they relate to the needs and functions of society and the economy <ul style="list-style-type: none"> Interviews with professionals in various occupations 	Students will be able to: <ul style="list-style-type: none"> Appreciate the concept of the global economy and its impact on individuals and society Know about the types and functions of occupations in the different industries Understand the value of all occupations and how they contribute to the well-functioning of society 	Students will be able to: <ul style="list-style-type: none"> Develop skills to locate, evaluate and interpret educational and career information effectively Identify career pathways of interest. Relate career assessment results to available local pathway options 	Students will develop: <u>Values</u> <ul style="list-style-type: none"> Respect for self Resilience as demonstrated through the will to pursue aspirations even if it is through less common pathways Responsibility in making decisions Civic responsibility in being informed about global issues

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
<ul style="list-style-type: none"> Researching career opportunities in local, regional and global workplaces 	<ul style="list-style-type: none"> Know about learning opportunities and how they will change over time 	<ul style="list-style-type: none"> Identify and investigate educational routes and experiences necessary to achieve their goals 	<u>Attitudes</u> <ul style="list-style-type: none"> Belief in one's competence Courage to face challenges and changes Pro-activeness in keeping oneself informed Confidence in their ability to achieve their life goals Passion to continue learning and striving for higher standards Appreciation for the value of all occupations
Upper Secondary Career sectors exploration 4 <i>This may include:</i> a. Analysing the careers represented in the different industries and how they relate to the needs and functions of society and the economy	Students will be able to: <ul style="list-style-type: none"> Know several effective ways of exploring possible appropriate career options Appreciate the concept of the global economy and its impact on individuals and society 	Students will be able to: <ul style="list-style-type: none"> Develop skills to locate, evaluate and interpret educational and career information effectively 	Students will develop: <u>Values</u> <ul style="list-style-type: none"> Respect for self Resilience as demonstrated through the will to pursue aspirations even if it is through less common pathways Responsibility in making decisions Civic responsibility in being informed about global issues

<u>Topics</u> Content	Knowledge	Skills	Values / Attitudes
b. Identifying their own personal characteristics and schooling experience and relating them to the various education and career pathways available <ul style="list-style-type: none"> • Reflection activities • Investigating educational routes and experiences necessary for a particular job 	<ul style="list-style-type: none"> • Know about career opportunities in local, regional, and global workplaces • Understand how academic, technical, cross-sector and employability skills are needed to obtain or create, maintain and advance in one's career • Understand the value of all occupations and how they contribute to the well-functioning of society • Know about learning opportunities and how they will change over time 	<ul style="list-style-type: none"> • Research different types of career information resources to find information on careers that relate to personal self knowledge and traits • Apply career information to job search and education planning. 	<u>Attitudes</u> <ul style="list-style-type: none"> • Belief in one's competence • Courage to face challenges and changes • Pro-activeness in keeping oneself informed • Confidence in their ability to achieve their life goals • Passion to continue learning and striving for higher standards • Appreciation for the value of all occupations

The following are possible students' life experiences which can be used as contexts for the application of the relevant knowledge, skills and values/ attitudes:	
Possible Contexts for Lower Secondary	Possible Contexts for Upper Secondary
<ul style="list-style-type: none"> • Selecting a subject combination • Participating in VIA • Participating in learning journeys • Participating in community events 	<ul style="list-style-type: none"> • Thinking about post-secondary life • Planning a career • Attending career fairs • Participating in VIA • Participating in learning journeys • Participating in community events • Participating in work attachments • Discussing Budget and National Day Rally speeches

Pedagogy

The following strategies will be adopted as mainstays in the ECG lessons:

Teaching Strategies	Description	Particularly useful...	Example
Case Scenarios	<p>Case scenarios depict real-life situations in which problems need to be solved.</p> <p>They provide authentic contexts for students to practise their skills and assess their learning.</p>	For lessons focusing on skills acquisition – developing student reasoning, problem-solving and decision-making.	<p>Case scenarios of possible options chosen by a Sec 4 student upon graduation:</p> <ul style="list-style-type: none"> • <i>Scenario A – Going on to JC;</i> • <i>Scenario B – Going on to Polytechnic;</i> • <i>Scenario C – Going on to ITE;</i> <p>may be used to help students clarify their thinking and consolidate their possible options.</p>
Narratives	<p>This approach involves telling stories, both fictional and real-life, to help one to gain understanding through the concretisation of real life experiences and interaction (Bruner, 1990).</p> <p>Teachers can use a variety of resources such as newspaper articles and stories of actual persons, particularly those students can identify with. This approach provides the opportunity for</p>	For topics such as choice of subjects as pupils would have yet to concretise their future paths.	A narrative of a student recollecting and reflecting on his choice of subject combinations at Sec 2 would guide students in their consideration of choice of subjects.

Teaching Strategies	Description	Particularly useful...	Example
	the pupils to process their learning through narrative thoughts.		
<p>Co-operative Learning Strategies</p> <p><i>"What children can do together today, they can do alone tomorrow."</i></p> <p><i>Lev Vygotsky, 1962</i></p>	<p>An instructional strategy which provides students with a defined framework to work with and learn from one another.</p> <p>Cooperative learning helps students learn social skills, develop positive traits and effective work habits that are essential for them to be work-ready and workplace ready in the future.</p>	<p>When wanting students to increase their collective knowledge through interactions. It allows them to hear different perspectives, surface assumptions and blind spots, and helps promote exploration of options and possibilities.</p>	<p>Jigsaw</p> <p>Numbered Heads Together</p> <p>Pair Read</p> <p>Think-Pair-Share</p> <p>Discussion-Small Group-Knowledge</p>
Computer Based Learning	<p>The use of the ECG portal will be interwoven with the lessons and students will be encouraged to explore further on their own.</p> <p>This will help them acquire information-search and information-processing skills that are needed for continuing learning and career development.</p>	<p>When promoting ownership and self-directedness.</p>	<p>Use of ECG Portal</p>

Assessment

The primary purpose of assessment is to facilitate student learning. Assessment in ECG is about enabling students to integrate self-knowledge with opportunity awareness to develop an individualised education and tentative career-life plan.

Areas to be assessed

A series of cumulative assessment tasks which build towards the individual's articulation of their post-secondary education and career plan will be introduced at appropriate milestones of learning for pupils to consolidate what they have learnt.

Students' updating of their ePortfolio at the end of each year will also allow them to monitor their personal development and make plans on how to progress.

Approach to assessment

The approach to assessment for learning in ECG puts students at the centre of decision making.

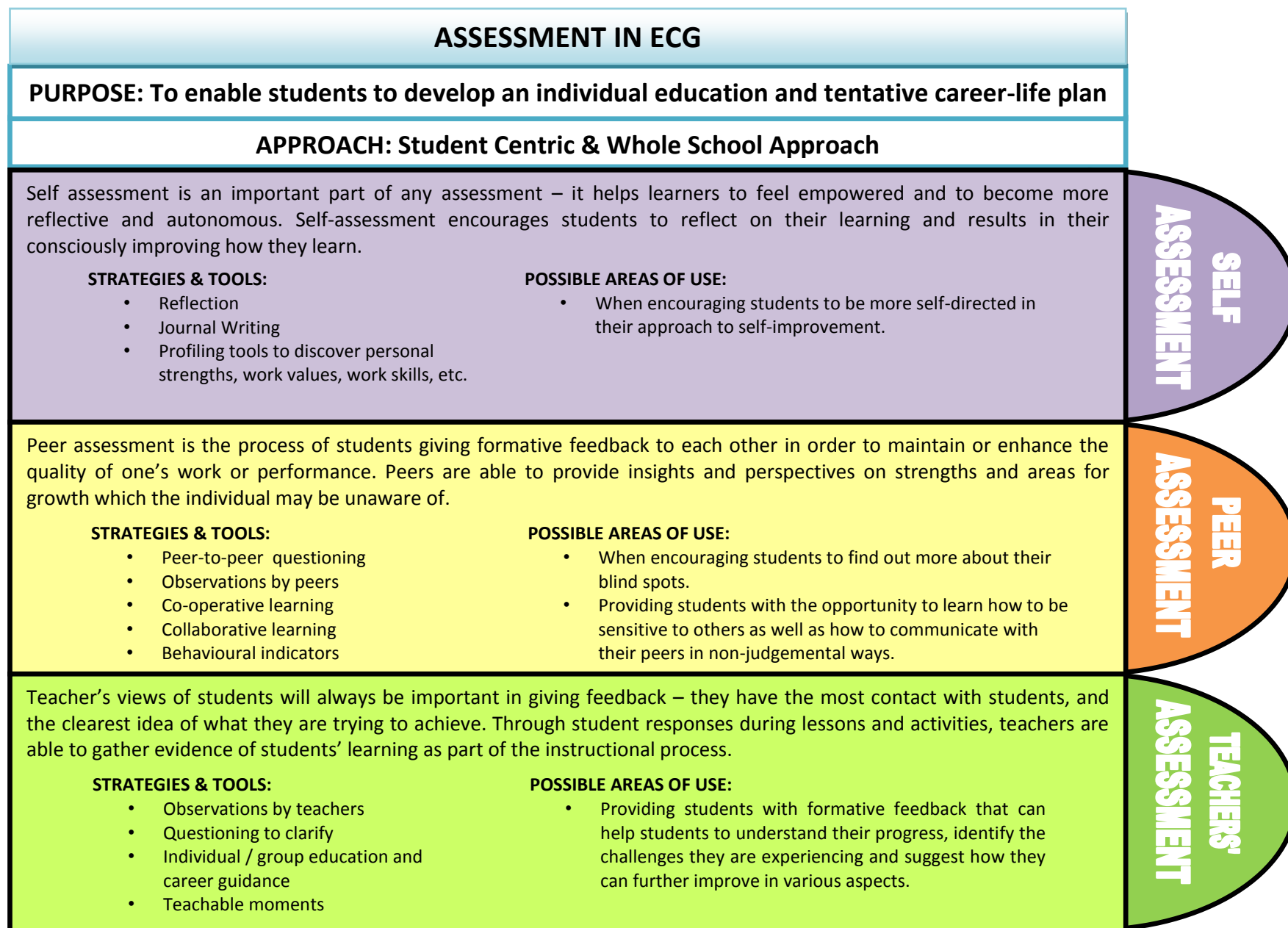
Students can contribute towards their own learning process through self and peer assessment. They should be involved in making judgements of their own work, monitoring their own progress and learning to set goals for themselves.

Students need to understand clearly what is expected of them in the assessment tasks. Therefore, each assessment task is to be accompanied by assessment criteria that are clearly communicated to the students.

Form teachers may discuss with other teachers their observations of students' learning in different contexts and hence ensuring a more holistic picture of the students' progress in ECG.

Figure 6 outlines the overview of assessment in ECG.

Figure 6: Assessment Overview



RESTRICTED

Social and Emotional (SE) Competencies in the context of ECG

SEL Domain	SE Competencies	In the Context of ECG
Self Awareness	Accurate self-perception	Able to identify their career interests, work skills, work values and life roles and goals
	Recognising strengths, needs and values	Able to accurately apprehend the gap between their current realities and future aspirations
	Self-efficacy	Have confidence in their ability to achieve their life goals
	Spirituality	Values clarification that will help to inform students' sense of meaning and higher purpose that impacts on options of education and career pathways
Social Awareness	Perspective taking	Aware of the diversity of roles, skills and knowledge in work groups and the world of work
	Appreciating diversity	Knows about trends and opportunities available in the world of work; understand the different educational options and pathways needed for a particular career and future education/training opportunities
	Respect for others	Understand what it takes to work with others
Self Management	Self-motivation and discipline	Have aspirations and work purposefully to achieve academic and career goals; appreciate the need for continual improvement and lifelong learning in their efforts to achieve their academic and career goals
	Goal setting and organizational skills	Develop goals for the aspired educational pathways and tentative career options
Relationship Management	Working cooperatively	Demonstrate effective communication skills required for relating to team mates in schools and future workplace
	Negotiation, refusal and conflict management	Demonstrate interpersonal skills needed to effectively relate to fellow colleagues and superiors during job attachments
	Seeking and providing help	Managing competing expectations about education and work from significant others
Responsible Decision Making	Problem identification and situation analysis	Able to articulate a short term and long term education and career plan
	Problem solving	Able to make responsible decisions regarding utilising available resources to help them achieve academic and life goals
	Evaluation and reflection	Able to reflect on and evaluate their current reality, make relevant education and career choices, and plan for their education and career
	Personal, moral and ethical responsibility	Able to use the education and career plan to work purposefully in school

Critical Briefings by Schools

List of Critical briefings for Students/Parents

Level	Briefing	Suggested Briefing Time + Rationale
Primary 5	Direct School Admission – Secondary (DSA-Sec) briefing	Term 1 – To provide students with sufficient time to plan their activities in order to ensure a holistic portfolio (e.g. build up portfolio based on their aspired schools niche area)
Primary 6	Multiple Pathways/Tracks in Secondary School <ul style="list-style-type: none"> • Mainstream Secondary Schools • Pre-Vocational Schools • Integrated Programme Schools • Specialised Independent Schools 	Term 1 – To provide students with sufficient time to make decisions, set and work towards their targets
Secondary 2	Subject Combination Choices and their Implications	Term 1 – To provide students with sufficient time to make decisions, set and work towards their targets
Secondary 3	Briefings on <ul style="list-style-type: none"> • Direct School Admission – JC (DSA-JC) • Direct Polytechnic Admission (DPA) • Polytechnic Foundation Program (PFP) • Direct Entry Scheme (DES) to the Institute of Education (ITE) • Elective Modules (EM) • Advanced Elective Modules (AEM) 	Term 1 – To provide students with sufficient time to plan their activities in order to ensure a holistic portfolio (e.g. build up CCA portfolio for a strong leadership profile)
Secondary 4/5	Post Secondary Options + Multiple Education Pathways <ul style="list-style-type: none"> • For N(A) and N(T) – focus on additional pathways to enter Polytechnic or ITE (e.g. PFP and DES) and their respective requirements • For all students – highlight Junior College/Millennia Institute, Polytechnic and ITE options available Ensure that students are aware of the options available to them if they do not do well enough to enter the course of study of their choice.	Term 1 – To provide students with sufficient time to make decisions, set and work towards their targets

ECG Lessons and Interaction Activities in FTGP

Primary 3 & 4		Primary 5 & 6	
Lessons	Interaction Activities	Lessons	Interaction Activities
<ul style="list-style-type: none"> • Appreciating People from Different Occupations • Motivating Me 	<ul style="list-style-type: none"> • Working with People, Data, Things, and Ideas • Let's Play Smart! • Creative Poses • What's New? • Naturally Me • How May I Help You? • Occupation Action • Keep Exploring and Discovering 	<ul style="list-style-type: none"> • Creating A Representation of Myself • Exploring Work Activities and Work Values* • My Educational Pathway* • Selecting My Secondary School* • My E-portfolio 1* • My E-portfolio 2* 	<ul style="list-style-type: none"> • Exploring the Industry Landscape • On a Hunt! • Do We Match? • What Are Your Aspirations? • Do You Know Me? • Exploring Occupations*

Lessons involving usage of ECG portal are indicated by *

Engaging Parents as Key Partners

Strategies	Ideas to achieve this	Useful Resources
Increase parents' awareness and participation in their child's education and career development	<p>During the Parent Teacher Conference, arrange to have awareness talks for parents on:</p> <ol style="list-style-type: none"> 1. What is ECG?; 2. Why ECG is important to their child's future?; 3. The MOE Education Landscape; 4. How parents can play a part in guiding their child to make informed education and career choices that would best meet their needs and interests 	<p>In addition to those listed in Annex E under 'Resources for the Community', schools can also use:</p> <ul style="list-style-type: none"> • The ECG publicity video which can also be found on the www.ecareers.sg site • ECG Bites (ppt) May 2012 Issue for Primary and Secondary schools features "Getting Parents Involved"
Increase parents' participation in the development of the school's ECG Programme by including them in the process of providing ECG from schools – not only are you able to widen the support structure for the programme but you also increase your manpower and resources	<p>Schools can consider:</p> <ol style="list-style-type: none"> 1. Inviting parents to share about their occupations during Assembly slots or CCE periods 2. Asking parents to enquire if the companies they work at are willing to provide job internships or work shadowing experiences for students 3. Inviting parents of recently-graduated students to come back and share their experiences with current parents. They can focus on sharing: <ol style="list-style-type: none"> a) Tips on how best to support their child <ul style="list-style-type: none"> • Academically • Mentally • Emotionally b) Challenges they faced and how they overcame them (e.g. anxiety that the child won't do well, etc) c) How they supported their child in his/her decision-making process regarding the next stage of their education journey and career aspirations 	

ECG Resources for Schools

ECG resources have been developed for parents/significant adults, teachers and key personnel to

1. Enhance their knowledge of what ECG is about
2. Equip them with practical tips and strategies in implementing and facilitating effective ECG so as to place them in a better position to advise students/children to make informed decisions on their education and career journey

Community

- i. Parent's Portal
- ii. ECG Parent's Brochure
- iii. Your Child's Education – Finding the Right Fit

Students

- i. ECG portal

All Teachers and Key Personnel

- i. E Learning Module
- ii. Monthly ECG PowerPoint Bites
- iii. FAQs – Addressing Your Concerns
- iv. ECG Edumall Page
- v. ECG Portal
- vi. PCCG Lifeskills Resource Package
- vii. ECG Lessons incorporated in FTGP for P3-6
- viii. ECG Portal Lessons

Key Personnel

- i. ECG Mass Training
- ii. Levels of Implementation + ECG Resource Package

***Details of resources are available in the following pages*

Resources were developed incorporating feedback gathered through focus group discussions with parents, teachers and students, mass trainings and the implementation survey. ECG key personnel were also consulted to ensure the relevancy and practicality of the ECG resources.

Schools are periodically informed of these resources through the

1. Induction for new HODs
2. Monthly ECG Bites (PowerPoint slides) to schools
3. ECG Mass Training
4. Guidance Branch annual information sheets to all schools

Resources for the Community

Available ECG Resources	Content	Where to Find Them
Parents Portal – Parents in Education	<ul style="list-style-type: none"> Information providing insight on how parents can play a more engaged role in their child's education Tips on how parents might better guide children in their educational planning and career choices 	http://parents-in-education.moe.gov.sg/primary-education/how-can-i-support-my-child-s-growth-and-development/education-and-career-guidance
ECG Parents' Brochure	<ul style="list-style-type: none"> Information providing insight on the importance of ECG Tips on how parents might better guide children in their educational planning and career choices 	PDF file can be downloaded from www.ecareers.sg or from Edumall
"Your Child's Education – Finding the Right Fit" Bookmark	<ul style="list-style-type: none"> Suggestions on things which P6 parents may wish to consider when helping their child find the right education fit for the next stage of their journey 	PDF file can be downloaded from www.ecareers.sg or from Edumall

Resources for Students

Available ECG Resources	Content	Where to Find Them
ECG portal	<ul style="list-style-type: none"> Assessments to find out more about individual career personality Information about various Secondary Schools (Primary portal) and Post Secondary Institutions (Sec and JC/CI portal) Information about various occupations 	www.ecareers.sg

Resources for Teachers and Key Personnel

Available ECG Resources	Content	Where to Find Them
E Learning Module	<ul style="list-style-type: none"> 4 topics covering a range of ECG areas Meant to equip all educators with the knowledge and skills so as to enable them to more effectively facilitate ECG discussions in the classroom 	www.vital.moe.gov.sg Course Code: G0460 Course Title: ECG E-Learning module
Monthly ECG Bites (ppt) titled “Helping our children realize their dreams”	The slides cover a wide scope of education and career areas, including: <ul style="list-style-type: none"> Discussions on key features of the www.ecareers.sg portal and suggestions on how to integrate them with the school’s key events/activities (e.g. parent-teacher meetings, assembly talks) Suggestions on how possible collaborations with other stakeholders may enhance students’ ECG experience Tips on how to incorporate ECG with other academia Suggestions on how to get parents involved in guiding their children 	PDF file can be downloaded from www.ecareers.sg or from Edumall

Available ECG Resources	Content	Where to Find Them
	The slides have been differentiated to suit the varying needs of the Pri, Sec and JC students and systems.	
Education and Career Guidance Frequently Asked Questions (FAQs)	<ul style="list-style-type: none"> • Response to feedback received from schools via the annual implementation survey. <p>The document has been differentiated to suit the varying needs of the Pri, Sec and JC students and systems.</p>	PDF file can be downloaded from www.ecareers.sg or from Edumall
ECG Edumall Page	<p>This page provides</p> <ul style="list-style-type: none"> • An overview of ECG • Links to all ECG resources available 	www.subjects.edumall.sg/cos/o.x?c=/subjects/pagetree&funct=view&ride=10501 or type in “ECG” under the search function on the Edumall homepage
ECG portal	<ul style="list-style-type: none"> • Activities to engage students in career development activities (career assessments, occupation databases etc) • The professional site within the ECG portal provides resources for teaching, training and development, programme planning, and usage monitoring 	www.ecareers.sg

Resources for Key Personnel

Available ECG Resources	Content	Where to Find Them
ECG Mass Training	<ul style="list-style-type: none"> • Held annually to equip KPs with the ability to plan and implement a school-wide ECG programme effectively • During the ECG Mass Trainings for key personnel, KPs are provided with the following resources <ol style="list-style-type: none"> 1. ECG training manual 2. ECG portal training manual 3. Planning tools to help craft and implement a school-wide ECG programme 	
Levels of Implementation + ECG Resource Package	<ul style="list-style-type: none"> • Level of Implementation – A quick check-in tool for KPs to determine where their school's ECG programme stands in relation to leadership, resources, training and partnership. • ECG Resource package – Accompanying document to Levels of Implementation which provides schools with suggestions on how they can value add to the current ECG programme in relation to leadership, resources, training and partnership. 	Given out to KPs during ECG mass training
Pastoral Care and Career Guidance (PCCG) Lifeskills Resource Package	Education and Career Guidance lesson plans	Provided to schools since 1997 as part of PCCG implementation

Available ECG Resources	Content	Where to Find Them
ECG Portal Lessons	<p>Lessons based on the ECG Portal – differentiated for Primary and Secondary/JC students</p> <p>Portal-based lessons (Pri):</p> <ol style="list-style-type: none"> 1. Getting Started and Avatar Creation 2. School Search (Part 1) 3. School Search (Part 2) 4. Industry Landscape 5. Discover Occupation (Part 1) 6. Discover Occupation (Part 2) 7. Occupations Game 8. The ePortfolio 9. Self Exploration Game <p>Portal-based lessons (Sec/JC):</p> <ol style="list-style-type: none"> 1. Getting Started 2. Career Cluster Exploration 3. PGI 4. PGI Worksheet 5. Skills 6. Becoming Aware of Work Values 	www.ecareers.sg
<p>ECG lessons (Primary School)</p> <p><i>Note: An update email dated 26 March 2012 containing links to the updated package had been</i></p>	<ul style="list-style-type: none"> • Lessons to help primary school students in their educational planning, choice of secondary schools, awareness of occupations and nurturing aspirations for the future 	<p>Incorporated in the Form Teacher Guidance Period (FTGP) lesson package (2nd Edition) for Primary 3 to 6 with effect from 2012.</p> <p>These FTGP lessons have been updated to include</p>

Available ECG Resources	Content	Where to Find Them
<i>sent to HOD/PW.</i>		ECG lessons as well as lessons infused with Financial Literacy and Cyber Wellness.

Building ECG Capacity of School Personnel

Capacity Building

A 3-tiered approach to professional development in ECG has been adopted for building capacity of school personnel:



Tier 1: Classroom level. An e-learning module to equip teachers on basic facilitation of ECG for effective lesson delivery and basic educational counselling has been developed and made available on VITAL since September 2012. The module comprises 4 topics that address the what, why, how and when of educational counselling.

A deck of slides on the Education landscape which school leaders can use to brief teachers and parents. The slides cover all the education options available from primary school to post secondary institutions. They are currently being developed and will be available to school leaders in Semester 2, 2012.

Tier 2: School-wide planning. ECG Mass Training for Primary, Secondary and JCs/CI key personnel overseeing ECG are held annually to equip them to plan and implement a school-wide ECG programme effectively.

Tier 3: Individual or Group level. Career counselling courses are organised to equip school counsellors with more in-depth knowledge and skills and tools to provide career counselling. This course has been made a milestone course for all school counsellors.

1. On-site school training will be provided for up to 25 schools that need support in portal implementation. *School consultation* on ECG programming will be provided for selected schools where targeted intervention will value-add to ECG delivery for these schools.
2. *Cultivation of ECG partner schools*: To date, 21 schools have shared their good practices in ECG delivery with other schools at various platforms. These schools will serve as reference schools in ECG implementation.
3. *Monthly ECG Bites* on 'Helping our students realise their dreams' are emailed to key personnel to share useful tips in ECG implementation.

Child Development Theories and Applications in the ECG Syllabus

Why are theories important? Theories help us make sense of our experiences and can provide a meaningful framework when you work with your students. Having knowledge of theories will enable you to have a better understanding on the use of particular strategies and will help you determine how to use them, when to use them and why you use them. The following is an overview of some theories that inform ECG practice:

Life-Span, Life-Space Theory (Donald Super)

According to Donald Super, *career development is closely interlinked* with the individual's physical, emotional, cognitive and social maturation.

This theory attempts to account for the various important influences on people as they experience different life roles and various life stages (Table 3).

Super's major tenets are as follows:

- Every individual has potential. People develop their skills and talents through different life roles making them capable of a variety of tasks and numerous occupations.
- People seek career satisfaction through work roles in which they can express themselves. Self-knowledge is key to career choice and job satisfaction.
- Career development is life-long and occurs throughout the various life stages. Each stage has a unique set of career development tasks and accounts for the changes and decisions that people make from career entry to retirement.
- People play different roles throughout their lives, for example, as a child, student (learner), worker and citizen. Job satisfaction increases when a person's self-concept includes a view of the working-self as being integrated with their other life roles.

Applications

It is important for children to be given opportunities to explore a wide array of activities and allow them to pursue their interests regardless of abilities in Primary 1-4. Continue to encourage exploration while honing interests based on their stronger areas from Primary 5 onwards.

At Secondary 3, students will be more ready to weigh their options and work towards tentative life goals.

Table 3: Super's Sub-stages pertaining to children and adolescents

Stage	Age	Career Development
Curiosity	0 – 3	-
Fantasies	4 – 6	Choices are fantasy-based.
Interest	7 – 10	Children tend to make choices based on interest, but have not developed their ability to judge their capacities.
Capacity	11 – 14	More able to accurately assess their abilities.
Tentative choices	15 – 17	More able to take their goals and values into consideration when making a career decision.
Crystallizing and Specifying	18 and above	Reality conditions play a bigger role. Students are aware of imminence of making career decisions but may not be ready to make a decision.

Theory of Circumscription and Compromise (Linda Gottfredson)

Linda Gottfredson posits that career development is a gradual narrowing of one's occupational possibilities through the process of circumscription and compromise.

Circumscription involves the inclusion and elimination of occupational alternatives through an age-graded developmental sequence (*Table 4*).

Compromise on the other hand refers to the process of closing the gap between the ideal and the reality in the world of work.

Gottfredson's theory highlights the importance of gender and prestige in career decision-making.

Applications

While it is appropriate to start introducing ECG to the younger students, it is important to prevent the narrowing of choices too early.

Educators should be mindful not to perpetuate gender stereotypes and encourage students to see the value in every job. You can help to shape the value systems of your students; help them to see that all occupations make a contribution to our society and that there is pride in a job well-done, regardless of prestige level.

Table 4: Stages of circumscription

Stage	Age	Career Development
Orientation to Size and Power	3 – 5	Children become more aware that adults have roles in the world. They realise that they will eventually become adults and take on roles for themselves.
Orientation to Gender Roles	6 – 8	Start to recognise job types and begin to assign to them gender roles. They will start to see jobs which do not match their gender identity as unacceptable.
Orientation to Social Valuation	9 – 13	They begin to classify jobs in terms of social status (e.g. income, education level, lifestyle) as well as sex-type. Based on their social environment, they will begin to designate some jobs as unacceptable because they fall below a minimum status level. Some higher status jobs will also be deemed unacceptable because they represent too much effort or risk of failure.
Orientation to Internal Unique Self	14 and above	Personal attributes such as interests, abilities, values, work-life balance and personality come into play to identify an appropriate field of work. Here, more sophisticated matching theories e.g. Holland-RIASEC become relevant. Students are likely to exclude options which do not fit with their self image.

Theory of Vocational Choice (John Holland)

RIASEC is the set of six personality and work environment types described by John Holland. They represent:

Realistic
Investigative
Artistic
Social
Enterprising
Conventional

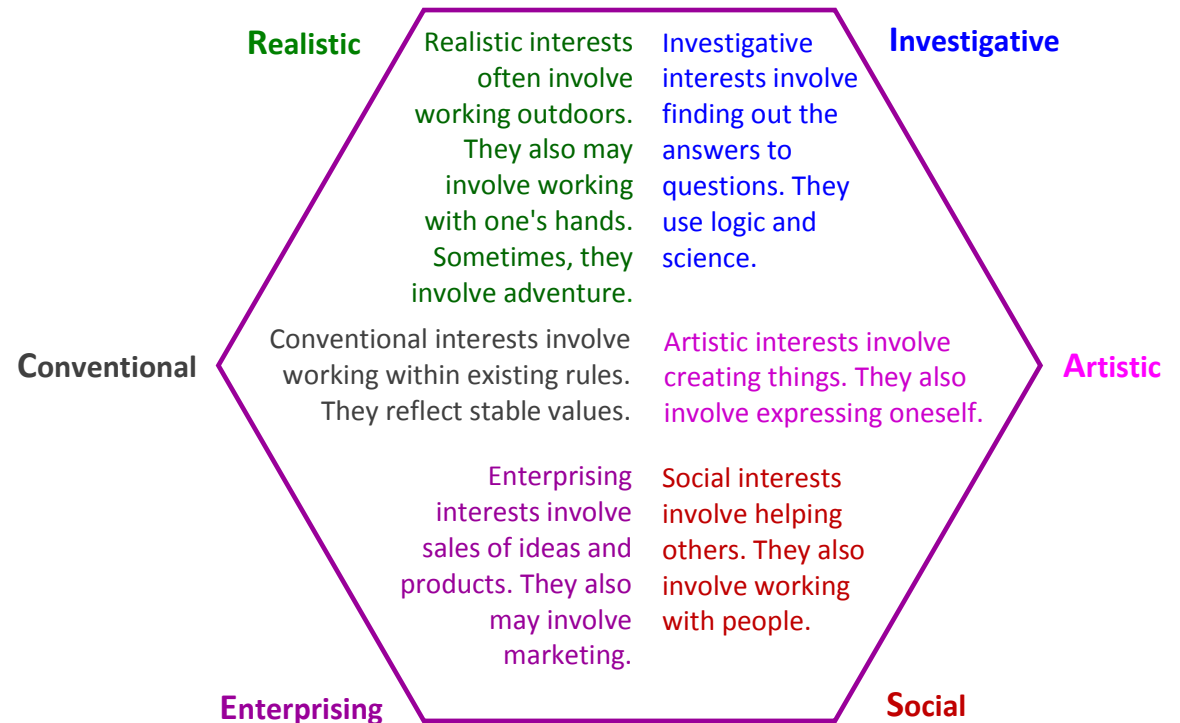
A mix of interests can be unique to occupations. For example, doctors often have interests that are investigative, social and enterprising. They enjoy finding out the answers to problems; like working with people; and, they often create their own medical practice.

Figure 7 describes the characteristics of the RIASEC's six personality and work environment types.

Applications

People with certain interest profiles are better-suited to certain jobs due to the matching nature of the work. Encourage students to find out more about occupations which match with their RIASEC profile.

Figure 7: RIASEC



Structure of Interest – The Personal Globe Inventory (Terence Tracey)

Terence Tracey expanded on Holland's six types to eight basic activities: Social Facilitating, Managing, Business Detail, Data Processing, Mechanical, Nature/Outdoors, Artistic, and Helping, and included a prestige element with a "globe" representation of one's interest.

In the general sense, prestige represents the difficulty, training, knowledge, and education required of the various activities. While two persons may have interest in the same area (e.g. Helping), one may prefer activities that are demanding and require extensive training while the other like activities that are easier to perform and simple to learn.

Table 5 shows the continuum of the prestige scales.

The Personal Globe Inventory (PGI) is a measure of one's interest development.

- ★ 10 – 13 years → Development of Interest and Self-Competence
Interest leads to the development of self-competence and that in turn fosters interest
- ★ Above 13 years → Increased differentiation in Interest and Self-Competence

Applications

In the primary grades, Tracey has found that interests and competence expectations shift and change a great deal (Tracey, 1998).

As teens develop more abstract thinking skills, Career Interest Inventory tools e.g. PGI become more appropriate (Sec 2 onwards).

Table 5: Continuum of prestige scales in the PGI

Continuum	Prestige scales	Focus
High	Social Sciences	psychological and medical helping
	Influence	leading and directing others
	Business Systems	applying knowledge to running businesses
	Financial Analysis	helping others with financial issues
	Science	general interest in science
Basic	Social Facilitating	working with others
	Managing	like various aspects of running a business
	Business Detail	detail and office activities in business
	Data Processing	aspects of managing detail and information
	Mechanical	like to understand and work on machinery
	Nature/Outdoors	like to work and be outdoors
	Artistic	creative and expressive activities
	Helping	helping others in a variety of manners
Low	Quality Control	checking details
	Manual Work	working with hands or simple machines
	Personal Service	working with people in everyday transactions
	Construction/Repair	working with machinery to repair or build
	Basic Services	selling products and services

Social Cognitive Career Theory (Lent, Brown & Hackett, 1994)

The Social Cognitive Career Theory (SCCT) extends Albert Bandura's (1986) general social cognitive theory to career behaviour. SCCT suggests that career behaviour is a result of interaction between self-efficacy, outcome expectation and goals.

Self-Efficacy: Beliefs about one's ability to perform specific behaviours

- "Can I do this?"
- Helps determine choice of activities, effort expenditure, persistence

Outcome Expectations: Beliefs about the consequences of given actions

- "If I do this, what will happen?"

Goals: Determination to engage in a particular activity or to produce a particular outcome

- "How much do I want to do this?"
- By setting personal goals, people help to organize, guide, and sustain their own behaviour

The focus of this theory is on the strength of the individual's belief that they can successfully accomplish something and this belief is more powerful than interests, values or abilities.

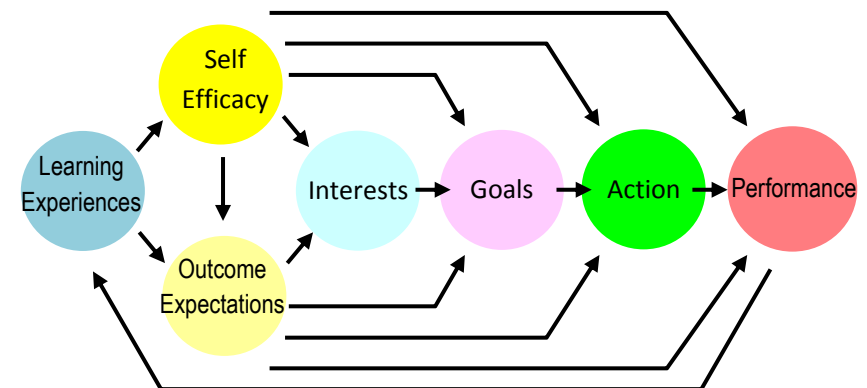
Figure 8 shows the interaction between self-efficacy, outcome expectation and goals.

Applications

As educators, if we are able to shape student's learning experiences so that they have the confidence to do things and expect positive results when they act on something, we can add tremendous value to their confidence, motivation and positive actions to plan for their future.

If students believe in themselves, they will be more engaged and proactive in finding out about their career interests and planning for their educational pathways, thereby promoting more favourable outcomes in life.

Figure 8: Social Cognitive Career Theory



Adapted from Brown & Lent (2004)

Theory of Cognitive Development (Jean Piaget)

To Piaget, cognitive development was a progressive reorganization of mental processes as a result of biological maturation and environmental experience.

Children construct an understanding of the world around them, then experience discrepancies between what they already know and what they discover in their environment.

Table 6 lists the stages of cognitive development.

Applications

Teaching strategies need to cater to the stages of cognitive development. According to Piaget, younger school-age children learn by assimilation and association. *Possible teaching strategies include imaginative play and use of drama. A wide variety of experiences such as learning journeys, story –telling, role-playing and art projects should also be incorporated in lessons* (Tan, Parsons, Hinson & Sardo-Brown, 2003).

Older children will begin to understand causality and categorisation (e.g. classification of occupations) before being able to apply ideas which are more abstract, for example, hypothetical reasoning, abstract thinking or projection into the future. Scenarios may include issues which are not experienced by individual students, but are critical for them to have the knowledge to manage. *Since students at this stage are able to introspect, teachers can challenge students by planning problem-specific questions to help them think critically about the issues at hand. They will be more ready to consider various possibilities, several perspectives and make more rational choices.*

Table 6: Stages of Cognitive Development

Stage	Age	Cognitive Development
Sensori-motor	0 – 2	-
Pre-operational	2 – 7	Children tend to be very egocentric, and see things only from their point of view.
Concrete-operational	7 – 11	Students' thought processes become more organized and they can think more logically. They recognize that their own perspectives and feelings are not necessarily shared by others (Ormrod, 2008). They are capable of deductive reasoning and can draw logical inferences from information they are given, even though they cannot imagine things independent of their immediate experience.
Formal-operational	12 and above	Capable of hypothetical-deductive reasoning, analogical reasoning and reflection. When confronted with a problem, they can formulate hypotheses and then deduce conclusion from them. Instead of relying solely on previous experiences, students begin to think more about moral, philosophical, ethical, social, and political issues that require theoretical and abstract reasoning, considering possible outcomes and the consequences of actions. Students are able to introspect and are more self-conscious (Vessels, 1998).

Theory of Psychosocial Development (Erik Erikson)

The stages of psychosocial development as articulated by Erik Erikson explain eight stages through which a healthily developing human should pass from infancy to late adulthood. In each stage the person confronts, and hopefully masters, new challenges.

Each stage builds on the successful completion of earlier stages. The challenges of stages not successfully completed may be expected to reappear as problems in the future. However, mastery of a stage is not required to advance to the next stage.

Table 7 provides details of Erikson’s stages related to children and adolescents.

Applications

Children aged 6 to 12 need to cope with new social and academic demands. Success leads to a sense of competence, while frequent failures can result in feelings of inferiority and loss of confidence. Hence, it is important to engage students in school activities that provide opportunities for them to experience successes.

Teens are seeking to develop their self-identity and their perceptions from life experiences also shape their identity. Providing learning experiences to help students discover more about their interests, values, strengths and areas for growth would be relevant for teens during this stage of their development.

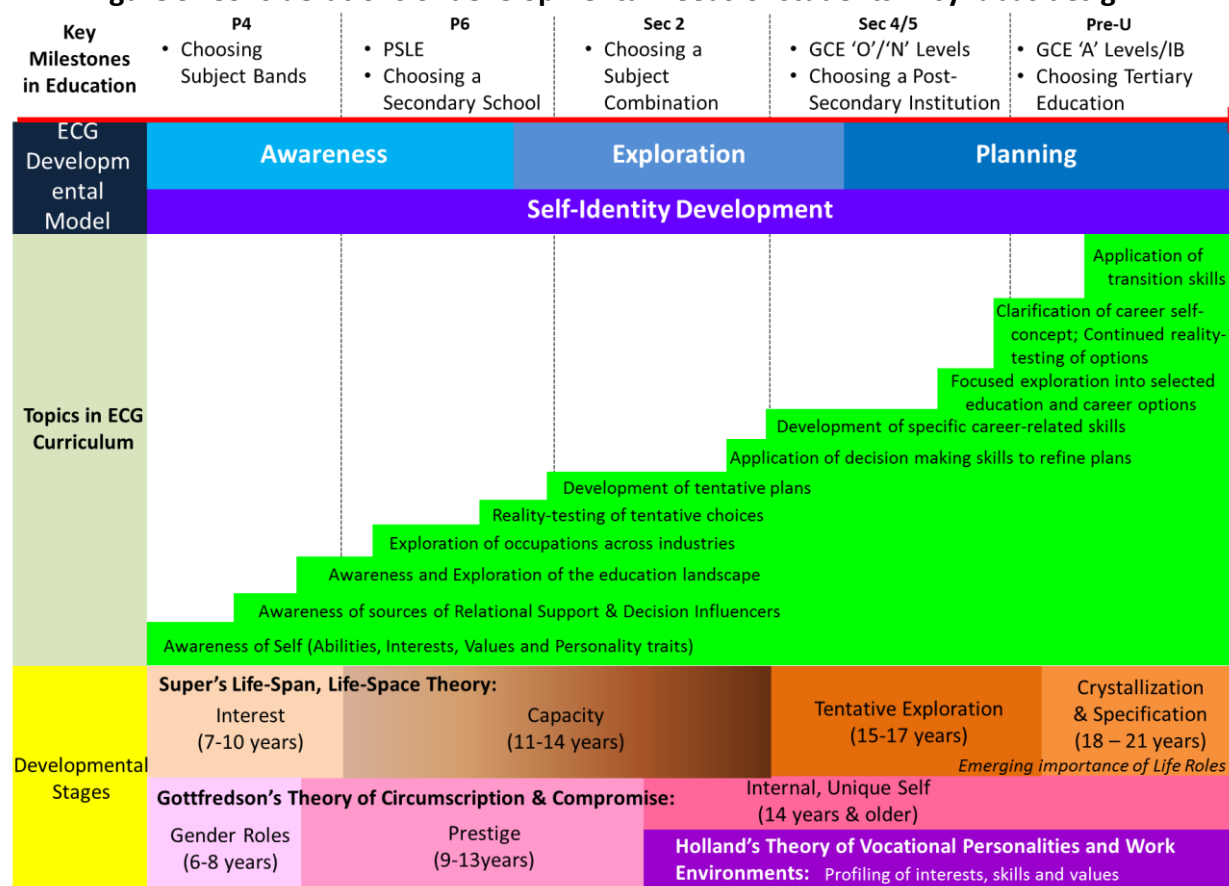
Table 7: Stages 4 and 5 of Psychosocial Development

Stage	Career Development
<p>Stage 4 – Industry vs. Inferiority</p> <p>Ages 6 – 12</p>	<p>Children encounter the challenges of school, functioning as a member of a family and relating to peers. A child who experiences failure at tasks, or is denied the opportunity to discover and develop their own capabilities and potential, may possibly develop feelings of inferiority. On the other hand, children who are encouraged and commended by parents and teachers develop a sense of competence. At this stage, the child’s most significant relationships would normally reside within the school and neighbourhood.</p>
<p>Stage 5 – Identity vs. Role Confusion</p> <p>Ages 12 – 18</p>	<p>This fifth stage corresponds to the crossroads of life; it is a bridge between childhood and adulthood. During adolescence, children explore their own identity through social interactions and attempt to “fit in” with their peers and social environments. At this stage, students develop a strong affiliation with their peers. They will also develop a strong need to personally explore different roles, try and learn new things in a bid to discover for themselves, who they really are and what values, and beliefs form their personhood. Those who receive proper encouragement and reinforcement from significant others in their lives will emerge from this stage with a strong sense of self and a feeling of independence. If not, they will suffer role confusion and a lack of identity. They will be confused about who they are and their life goals, and may simply conform to the expectations of significant others.</p>

Illustration of how the Theories have informed the Design of the ECG Syllabus

There are many theories which inform on career development. No single theory is comprehensive by itself and you will need to be able to pull from a combination of theories and strategies to best suit your students' unique needs. *Figure 9* provides an illustration of how the theories have informed the design of the ECG syllabus.

Figure 9: Considerations of developmental needs of students in syllabus design



Mapping of Topics for the ECG Syllabus

Themes	Topics	Pri 3 – 4 (Incorporated into FTGP)	Pri 5 – 6	Sec 1 – 2	Sec 3 – 5	JC/CI
Self-Awareness and Self-Management	• Awareness of strengths and preferences	✓				
	• Exploration of strengths, interests and work values		✓	✓		✓
	• Multiple Intelligences		✓			✓
	• Career interest profiling			✓	✓	✓
	• Awareness of career interests		✓	✓	✓	✓
	• Exploring work skills and work values		✓		✓	✓
	• Understanding change as a part of growth			✓	✓	✓
	• Decision-making process		✓		✓	
	• Maintain a planning portfolio		✓	✓	✓	✓
	• Goal setting skills	✓		✓		
	• Negotiation skills				✓	✓
	• Resume writing				✓	
	• Interview skills				✓	
	• Employability skills (e.g. communication, team-work, problem-solving)	✓ (Problem-solving method)			✓	✓
	• Enterprise skills (e.g. assertiveness, networking, creativity)				✓	✓

Themes	Topics	Pri 3 – 4	Pri 5 – 6	Sec 1 – 2	Sec 3 – 5	JC/CI
Awareness of Relational Support and Decision Influencers	• Sources of motivation	✓				
	• Positive self-concept	✓	✓			
	• Sources of relational support	✓	✓	✓		
	• Examining family influences			✓		
	• Awareness of work profiles of the different industries			✓	✓	
	• Exploring personal skills and values in relation to work environments				✓	
	• The changing global landscape				✓	✓
	• Life roles and stages of development	✓			✓	✓
Exploring the Education Landscape and Planning Pathways	• Choosing careers, charting pathways: My education (and career) plan		✓	✓	✓	
	• Selecting my Secondary school		✓			
	• Evaluating my (Sec 3) subject combinations and their implications			✓		
	• Explore Post-Secondary Education Institutions / multiple education pathways				✓	
	• Exploring aspirations and setting academic goals		✓	✓	✓	✓
	• Continuing Education: My financial plan				✓	✓
Career Sectors Exploration	• Appreciating people from different occupations	✓		✓		
	• Exploring different career sectors	✓	✓	✓	✓	
	• Traditional and non-traditional work options				✓	

Legend – Emphases on Awareness, Exploration and Planning based on the ECG Developmental Model:

Awareness	Exploration	Planning
-----------	-------------	----------

Glossary of Terms

Terms	Definition
Awareness	The awareness of one's interests, aptitudes, abilities, skills and values, and the evaluation of these characteristics in terms of education and occupational pursuits.
Career	The sequence and variety of occupations (paid and unpaid) which one undertakes throughout a lifetime. More broadly, 'career' includes life roles, leisure activities, learning and work.
Career Sectors	A methodological way to view jobs by grouping together similar job types e.g. the Finance Career Sector, Manufacturing Career Sector.
Career Counselling	An activity in which an individual trained in career facilitation and counselling assists the student in exploring his/her strengths and options, develop plans in and solve problems related to, education and career matters. This can also be done in small groups.
Career Development	The complex process of managing life, learning, and work over the lifespan.
Career Guidance	An inclusive term that has been used to describe a range of interventions including career education and counselling, that help people to move from a general understanding of life and work to a specific understanding of the realistic life, learning and work options that are open to them. Career guidance is often thought to incorporate career information, career education and career counselling.
Career-Life Plan	An individualised plan of one's desired career and how one intends on achieving employment in this area. In addition, one should also consider the various life roles, settings, and events that might influence one's career choices throughout one's life span.
Career Portfolio	Career portfolios are used to plan, organize and document education, work samples and skills. It is usually a file containing evidence of what a student has learnt about him/herself, education courses and careers he/she is interested in, decisions he/she has made and employability skills, qualities and knowledge gained (e.g. awards, result slips, testimonials, certificates etc.)
Career Self Concept	Individuals choose careers and express themselves fully based on who they think they are.

Terms	Definition
ePortfolio	The ePortfolio is a feature in the ECG portal which allows students to capture their skills and abilities, educational and career possibilities, achievement records and job-seeking profiles eg. resume, testimonials and letters of recommendations. Students may save and export their ePortfolio upon graduation from school.
Education/Career Clinics	Individual or small-group activity in which representatives from selected education institutions or professions hold walk-in interactive sessions for pupils to ask questions and find out more about the education courses/careers represented.
Education Plan	An individualised plan of one's desired education options and how one plans to attain it.
Employability Skills	General skills and attributes that are required to gain employment and may be transferred from one situation to another (<i>e.g. communication skills, verbal and written, interpersonal skills, adaptability and flexibility etc.</i>)
Exploration	Involves integrating self-knowledge with the awareness of the educational and occupation options and opportunities and seeing the linkages between our own learning with future career plans.
Life Roles	Examples of different life-roles are child, student (learner), worker, citizen, parent, homemaker, leisurite.
Job	A paid position requiring a group of specific attributes and skills that enable a person to perform tasks in an organisation either part-time or full-time for a short or long duration.
Occupation	A group of similar jobs found in different industries or organisations.
Planning	Involves taking actions to progress from one stage of education to the next and developing job seeking skills to transit successfully from school to the world of work. Aside from learning about occupations and industries, students also develop skills in gathering information from relevant sources and using that information to make reasoned decisions.
Professionals	A disciplined group of individuals who adhere and uphold themselves to ethical standards. They are accepted by the public as possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level. They are also prepared to exercise this knowledge and skills in the interest of others.

Terms	Definition
RIASEC	RIASEC (<i>Realistic, Investigative, Artistic, Social, Enterprising and Conventional</i>) code refers to the six basic career personality types and work environments for which they are best suited. Developed by late psychologist John L. Holland. Also known as Holland's Code. (<i>Annex G</i>)
Skill	An ability to perform a particular mental or physical activity which may be developed by training or practice.
Work	A set of activities with an intended set of outcomes, from which it is hoped a person will derive personal satisfaction. It is not necessarily tied to paid employment. It can encompass other meaningful and satisfying activities through which an individual's career develops, such as parenting or volunteering.
Work Experience	Individual vicarious activity carried out at the workplace to give students a "taste" of work life. During this period, students have the opportunity to learn directly about working life and the working environment. Most work experience positions offer students the chance to try their hand at particular tasks.
Work Shadowing	A less formal version of work experience where students have the opportunity to observe and talk to a person as they go about their day-to-day job.
Work Values	Work values are the subset of values that are important to people as pertaining to their career and can be intrinsic or extrinsic. An intrinsic value might be helping others, while an example of an extrinsic value is earning a lot of money. There is no right or wrong work value. Similarly, no work value is "better" than another. Work values can change over time but may remain stable and consistent as well.

References

- Bronfenbrenner, U. (1979) *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press
- Brown, S.D. & Lent, R.W. (Eds.). (2004). *Career development and counseling: Putting theory and research to work*. Hoboken, NJ: Wiley.
- Bruner, J. S. (1966). *Toward a Theory of Instruction*. Cambridge, MA: Belkapp Press.
- Bruner, J. S. (1990). *Acts of Meaning*. Cambridge, MA: Harvard University Press.
- CASEL: Collaborative for Academic, Social and Emotional Learning (2010). *What is SEL?* Retrieved Oct 2012, from <http://casel.org/why-it-matters/what-is-sel/>
- Casserly, M. (2012). *10 jobs that didn't exist 10 years ago*. Retrieved July 2012, from <http://www.forbes.com/sites/meghancasserly/2012/05/11/10-jobs-that-didnt-exist-10-years-ago/>
- Gottfredson, L.S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations [Monograph]. *Journal of Counselling Psychology*, 28, 545–579.
- Holland, J. L. (1959). A theory of vocational choice. *Journal of Counseling Psychology*, 6, 35-44.
- Holland, J. L. (1985). *Making vocational choices: A theory of vocational personalities and work environments* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Howard, E. M. & III, P. J. (2004). The 3 pillars of the collaborative career pathways model - Classroom, Community, and Counselling. *Career pathways: Preparing students for life*. Thousand Oaks, CA: Corwin Press.
- Krumboltz, J. D. (1979). A social learning theory of career decision making. In Mitchell, A., Jones, G. & Krumboltz, J.D. (Eds.). *Social learning and career decision making*. Cranston, RI: Carroll Press.
- Lapan, R., Gysbers, N., & Sun, Y. (1997). The impact of more fully implemented guidance programs on the school experiences of high school students: A statewide evaluation study. *Journal of Counseling and Development*, 75, 292-301.

- Lent, R.W., Brown, S.D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45, 79-122.
- Marcia, J.E. (1966). Development and validation of ego identity statuses. *Journal of Personality and Social Psychology*, 3, 551-558.
- Marcia, J.E. (1980). Identity in adolescence. In Adelson, J. (Ed.). *Handbook of adolescent psychology*. NY: Wiley.
- Ormrod, J.E. (2008). *Educational Psychology: Developing Learners*. NJ: Pearson.
- Perry, J. C., Liu, X., & Pabian, Y. (2010). School engagement as a mediator of academic performance among urban youth: The role of career preparation, parental career support, and teacher support. *The Counseling Psychologist*, 38, 269-295.
- Super, D. W. (1969). Vocational development theory. *The Counseling Psychologist*, 1, 2-30.
- Tan, C. C. (2011). Some thoughts on global education. *Journal of the NUS Teaching Academy*, 1 (1), 5-9.
- Tan, O. S., Parsons, R. D., Hinson, S. L., & Sardo-Brown, D. (2003). *Educational psychology: A practitioner-researcher approach (An Asian edition)*. Singapore: Thomson Learning.
- Tracey, T.J.G. (1998). Development of interests and competency belief: A 1-year longitudinal study of fifth- to eighth-grade students using the ICA-R and structural equation modelling. *Journal of Counselling Psychology*, 49(2), 148 – 163.
- Vessels. G. (1998). *Character and community development*. London: Praeger.
- Wiggins, G., & McTighe J. (2005). *Understanding by Design*. Alexandria, VA: Association for Supervision and Curriculum Development.
- U.S. Bureau of Labor Statistics. (2012). *Number of jobs held, labor market activity, and earnings growth among the youngest baby boomers: Results from a longitudinal survey*. Retrieved October 2012, from <http://www.bls.gov/news.release/pdf/nlsoy.pdf>

Acknowledgements

The Student Development Curriculum Division, Ministry of Education, wishes to acknowledge the contributions of the many teachers, Career Guidance Coordinators (CGC), Heads of Departments, students, parents, groups and institutions that participated in the process of the development and refinement of the Education and Career Guidance Syllabus.

We would like to record our special thanks to the following schools:

CHIJ St Theresa's Convent
Compassvale Secondary
Dunearn Secondary
Gan Eng Seng School
New Town Secondary
Serangoon Gardens Secondary
St Anthony's Canossian Secondary
Yio Chu Kang Secondary

We would also like to thank all who have helped in one way or another in the development of the Education and Career Guidance Syllabus.



Ministry of Education
SINGAPORE