Effective Teaching Strategies and Pedagogies in Numeracy Development (Previously Development of Numeracy in Early Childhood Education (Synchronous e-learning)

Certifiable Course: Non-WSQ
Duration: 14 hours over 2 days
Course reference number: NUMDNEC14E | TGS-2021010177

Mode of Application	Self-Registered & Nominated
Max Class Size	30
Min Class Size	20
Fee (without GST)	$ 380.00
Fee (with 9% GST)	$ 414.20
Mode of Delivery	Programme is conducted online via Zoom. (For information on How to Join a Zoom meeting, refer here.)

Programme Overview

In this workshop, participants will learn essential pedagogies and effective teaching strategies that will help children develop their numeracy skills. Through the use of different teaching and learning techniques and resources, participants will discover how various numeracy concepts and contents are taught to enrich children's learning experiences, and to enhance their understanding and engagement in learning. Participants will study fundamental learning theories including Bruner's CPA approach and Spiral approach and put them into practice through case study discussions as well as to design a lesson to be implemented in their classrooms, of which they will reflect and share their practical experiences during the second session. Participants will also explore the use of useful teaching tools and resources, including ten frames, concrete objects and experiences, children's literature and stories, as well as meaningful games and activities to teach various numeracy contents.

Learning Objectives
This workshop spans two days, each containing specific objectives to help participants:

Day 1:

- Gain an overview of the scope and sequence of pre-school numeracy content and children's numeracy development and understand the rationale of Spiral Approach.
- Understand and apply the core ideas in the development of early childhood numeracy, including addressing common misconceptions in the teaching of numeracy concepts.
- Explore pre-mathematical (pre-counting) concepts and promote learning in areas such as classification, seriation (creating series and patterns), rote-counting, shape, and spatial concepts.
- Understand and apply basic learning theories including the CPA (Concrete-Pictorial-Abstract) approach to plan and implement classroom lessons.
- Explore various counting strategies such as skip counting, counting on and counting backwards.

Day 2:

- Understand the three situation types of addition and subtraction, and the use of ten-frames, part-part whole concepts and number bonds to teach addition and subtraction.
- Discover the use of children's literature, stories, and games to teach the concepts of shapes, patterns, predictions, and numbers.
- Understand the importance and the application of visualisation skills to promote thinking and learning for understanding among preschool children.
- Intentionally and systematically introduce mathematical experiences into the early childhood curriculum and the daily programme routine, embedding mathematical concepts in real, concrete, and meaningful experiences.

Topics Covered

- Creative approach to help children learn rote-counting through sound and movements
- CPA approach to learn rational counting (one-to-one correspondence) and other numeracy concepts
- Use of ten-frames and part-part whole concept for developing number sense, counting, addition and subtraction
- Use of children's literature and stories to experience number bonds, three situation types for addition and subtraction
- Use of games and hands-on activities to teach cardinal, ordinal and nominal numbers
- Use of children's literature and stories to teach shapes, patterns and predictions
- Visualisation through concrete materials and pictures to promote thinking, problem solving and conceptual understanding
- Application of numeracy skills in real-life situation and experience

Remarks

- Educators, Centre and/or HQ Administrators must ensure that all employment and personal details (e.g., email addresses) in ONE@ECDA are updated and verified.
- Please check your emails at least 14 calendar days before the class start date for the Course Placement Letters.
- ECDA course fee subsidy is available* for Non-Singapore Citizens and Non-Permanent Residents (Non SCPR) for ECDA-endorsed courses (course fee before GST). Please refer to ECDAs CPD Prospectus for more details.

Subject to the availability of funds

Learning Area
- Aesthetics & Creative Expression
- Motor Skills Development
- Numeracy
- Social & Emotional Development

Intended Target Participants*: ECDA Scheme

LON Certification Status: L1, L2, EY2

Who should Attend:
Occupational Title – Beginning Preschool Teacher, Preschool Teacher, Senior Preschool Teacher, Lead Teacher, Lead Early Years Educator, Deputy Centre Leader , Centre Leader

Skills Unit

Occupational Title	Skills Category	Skills Sub-Category	Skills Unit
Beginning Preschool Teacher	Developing the Child Holistically	Learning Environment	Set up quality learning environments (Beginning Pre-school Teacher)
Beginning Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Evaluate teaching and learning approaches aligned to Curriculum Frameworks
Beginning Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Apply classroom management strategies, and strategies to observe and document children's learning
Beginning Preschool Teacher	Developing the Child Holistically	Child Development	Apply understanding of how children (birth to age 8) learn and develop (Beginning Pre-school Teacher)
Preschool Teacher	Developing the Child Holistically	Child Development	Apply understanding of how children (birth to age 8) learn and develop (Pre-school Teacher)
Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Refine classroom management strategies, and strategies to observe and document children's learning
Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Refine teaching and learning approaches aligned to Curriculum Frameworks.
Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Engage children meaningfully through the customisation of curriculum and use of appropriate pedagogy (Pre-school Teacher)
Preschool Teacher	Developing the Child Holistically	Learning Environment	Design quality learning environments (Pre-school Teacher)
Senior Preschool	Developing the Child Holistically	Child Development	Integrate understanding of how children (birth to age 8) learn and develop, within the curriculum

Teacher			
Senior Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Engage children meaningfully through the co-design of curriculum and appropriate pedagogy (Senior Pre-school Teacher)
Senior Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Customise strategies to observe and document children's learning (Senior Pre-school Teacher)
Senior Preschool Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Customise teaching and learning approaches aligned to Curriculum Frameworks
Senior Preschool Teacher	Developing the Child Holistically	Learning Environment	Design quality learning environments (Senior Pre-school Teacher)
Lead Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Drive the design, implementation and evaluation of teaching and learning approaches (Lead Teacher)
Lead Teacher	Developing the Child Holistically	Curriculum & Pedagogy	Inspire a love for learning through leading the design of curricula and programmes at the centre (Lead Teacher)

Funding Type WDA Cat-B

Fee (after subsidy) Funding for this course is available under the SkillsConnect System for Singaporeans and Permanent Residents (PRs). Please login to www.skillsconnect.gov.sg to apply for funding.

Mode of Delivery Zoom Webinar

Register via One ECDA Portal https://one.ecda.gov.sg

Entry Requirements

Skills and Knowledge
- Have good English proficiency (English language at GCE 'O' Level of C6 and above, or WSQ Workplace Literacy skills of Level 6 and above)   - Possess appropriate level subject matter specialisation and industry experience, relevant for the design, facilitation and assessment of learning   - Minimum 2 years of domain expertise   - Possess basic information and communication technology (ICT) skills   - Be able to source and analyse relevant materials from the workplace, library, internet or online databases for design and development of learning resources

Assessment Criteria

Upon completion of the first **7 hours** of training workshop, participants will then choose one learning outcome from The Nurturing Early Learners (NEL) Curriculum – Participants will then design and carry out a numeracy lesson for a preschool class based on the concepts and pedagogy learnt. They will document the assessment processes for the lesson in PowerPoint slides. The classroom lesson including the progress tracking component should be approximately **60 minutes**, and the documentation work in the form of PowerPoint slides should take no more than **90 minutes**. These are done before Day 2 of the workshop.

Participants will then share their classroom experience as well as their reflections on Day 2 of training workshop, using the PowerPoint slides and samples of children's work. They will also answer questions raised by the audience during the workshop. **60 minutes** will be allocated for the participants to take turns to share their documented classroom lessons with their group members within the group. Participants will learn from each other during the sharing, ask questions and provide feedback or peer assessment to each other within the group. In the next **20 minutes**, at least one participant will be sharing the documented lesson to the whole class for whole class learning and discussion. These presentations are part of the Assessment For Learning, while the grading of the participants will be based on the assignment submitted in the form of PowerPoint slides. The content of the assignment submitted will be evaluated to assess participants' understanding and competence in the subject knowledge, following the rubrics below.

Participants who fail to attend the workshop on both days or fail to submit their assignment, as well as those who fail to meet expectation in performance and understanding (based on rubrics below) will not be given the e-certificate. Arrangement can be made to complete their full attendance or to resubmit work before they are given a pass.

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Assessment Rubrics

Assessment Rubrics	Exceeding Expectation	Meeting Expectation	Below Expectation (Fail)
Attendance & class participation	Has attended workshop on both days and participated actively in class activities.	Has attended workshop on both days.	Has not attended workshop on both days.
Understanding and application of content	Has shown good understanding of concepts and appropriate application of approaches.	Has shown good understanding of concepts and appropriate application of approaches.	Show poor understanding of concepts and inappropriate application of approaches.
Assignment work (Presentation of PowerPoint slides on sharing of practices and reflection)	Assignment completed with rich input, presentation of work is detailed and elaborative.	Assignment completed with sufficient input, presentation of work is adequate.	Assignment not completed or submitted.

SkillsFuture Funding and SkillsFuture Mid-Career Enhanced Subsidy (MCES)

- For each module, you must achieve at least 75% attendance, and pass assessments.
- For more information on MCES, refer here.

SkillsFuture Credit

- You can use SkillsFuture Credit and SkillsFuture Credit Top-Up to offset the fees. Please register within 60 days from start date of the programme.
- You cannot use the $500 Additional SkillsFuture Credit (Mid-Career Support) which was disbursed in October 2020 to Singapore Citizens aged 40 to 60 as this programme does not qualify as a Career Transition Programme.
- For more information on SkillsFuture Credit, refer here.

Payment Advisory for Self-sponsored and Company-sponsored Applicants
- You will be required to make the course fee payment via eNets/credit card (VISA or MasterCard) and/or SkillsFuture Credit (SFC) - (applicable for self-sponsored applicant) at the end of the registration process. Please note that the system will automatically cancel the registration if full payment (including SFC, where applicable) has not been successfully processed by 11.59pm (Singapore Time) on the same day of the registration. You will have to reapply for the course, subject to seat availability at the point of re-registration.
- For dedicated corporate runs with a contract signed with MCE, billing and payment will follow the terms of the signed contract. If you wish to find out more on customised corporate arrangements, please get in touch with us by sending us an email to cs@mceducation.com.

How to Apply
Register via One ECDA Portal: https://one.ecda.gov.sg

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Administrative Matters

1. What if I miss class and cannot fulfil the 75% attendance requirement?

   ▪ There will be no replacement or make-up lesson for learners who have missed a class.
   ▪ If you fall short of the 75% attendance requirement in a module, you will not be allowed to take assessments. You may request a re-scheduling of session(s). Terms and conditions with an applicable fee apply:

Request for Re-scheduling of session(s) to fulfil 75% attendance requirement	
Re-scheduling free-of-charge for **Recognised absences** with supporting documents: ▪ Medical ▪ Reservist ▪ Court appearance ▪ Bereavement of immediate family members (parents, parents-in-law, siblings, spouse and children) ▪ Quarantine Order due to Covid-19 exposure (applicable to F2F sessions only)	**One-time ONLY per course** **Re-scheduling fee beyond the allowable Recognised Absences:** **$160.00** **(before GST)**
Processing Time for a Re-scheduled session is 10 working days, at at the earliest possible time slot(s), at Marshall Cavendish Education (MCE)'s discretion.	

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Programme Administrative Information

The Terms & Conditions listed below are applicable for all MCE's programmes.

MCE reserves the right to make changes or modifications to these Terms and Conditions at any time without prior notice, as it deems appropriate.

Pre-Course Administration

1. General

   ▪ All interested applicants must comply with the Marshall Cavendish Education (MCE)'s entry requirements and application procedures, which may include the submission of supporting documents, attending a pre-enrolment screening, or both.
   ▪ For courses with a screening component, unsuccessful applicants will bear the applicable screening fee in cash (i.e. SFC cannot be used). All applications are subjected to review by MCE, and the decision is final.

In-Course Administration

1. Online Learner Expectations

   ▪ Learners are expected to have access to a safe and robust network connection and a laptop running on Windows Operating System 7 and above (or MAC OS system).
   ▪ The laptop should have a pre-installed webcam or a headset with a USB webcam.
   ▪ The entirety of each training/assessment session will be recorded, and the learners must turn on their webcam at all times for attendance purposes.
   ▪ Learners' faces in the video recordings must be fully visible (i.e. the entire face and not just the forehead/eyebrows).
   ▪ Learners' full names, as reflected in their NRICs, should be indicated in the video recordings.

Post-Course Administration

1. Post-Training Administration

All WSQ certificates are issued by SkillsFuture Singapore (SSG) through MyskillsFuture Portal. Your SOAs, transcript or full qualification will be available 4 to 6 weeks upon the completion of the module or final assessment.

Notifications of e-Certificates (e-Certs) are also available via the MySkillsFuture mobile App.

Singaporeans and permanent residents can access/download the WSQ e-Certs upon logging in to the MySkillsFuture portal via SingPass and following the steps below:

   ▪ Go to the MySkillsFuture portal
   ▪ Click the SingPass icon and log in via SingPass
   ▪ Go to Skills Passport > click on Certificates to view WSQ e-Certs records
   ▪ Select trainee's WSQ e-Certs and click on "Download e-Certs"

Foreign trainees could follow the steps below:
- Go to the MySkillsFuture portal
- Go to 'Digital Services'
- Under 'Individuals', click 'Download Certificates'
- Click 'No Portal ID'
- Enter the relevant information to retrieve your certificates.

You may also view the user guide here.

Frequently Asked Questions (FAQs)

1. What if I do not meet the entry requirement for English Language proficiency?

- Learners who do not meet the requirements for English Language proficiencies as required by the respective courses need to take the Workplace Literacy (WPL) – Computer Adaptive Test (CAT) and secure the ES WSQ WPL qualification for listening and speaking reading and writing modalities. Please click here for more information.

- You may also provide other documented evidence of your proficiency in English or be required to attend an interview with MCE to ascertain your suitability for the programme.