工作坊論文徵集啟事

第二屆國際「打造趣創學習者(Interest-Driven Creators (IDC))：資訊科技的角色」工作坊

（第 20 屆全球華人計算機教育應用大會，香港教育學院，2016 年 5 月 23 日至 27 日）

GCCCE 2016 網址：http://gccce2016.ied.edu.hk/

工作坊網址：http://idc-workshop.weebly.com/

　　「趣創者計畫」（The Interest-Driven Creator (IDC) Initiative）是由一群亞洲的教育科技、學習科學和教育心理學領域的學者（完整名單請看附錄一）所發起的一項學習理論整合計畫。計畫的主要目的是集學界專家的智慧和研究成果，共同建構一個宏觀性的「趣創者理論」框架（參見附錄二）。此理論主張，學習者可通過對於（學科）興趣、創造（能力），及（學習）習慣的培養（在這過程中，教育科技的應用可成為重要手段），以期最終成為終生學習者。

　　本工作坊旨在為參與「趣創者計劃」的學者提供一個於 GCCCE 會議期間進行面對面交流的平臺，並藉此機會跟其他 GCCCE 與會者分享這個理論框架及收集他們的意見，讓仍在開發和完善中的趣創者理論獲得的深化和提升。第一屆工作坊已於去年在杭州 International Conference on Computers in Education (ICCE)舉行，本屆工作坊是第一次在 GCCCE 舉行，也是第一次以中文為媒介語辦這個工作坊。

　　本工作坊將採取「小型主題研討會」的形式。除了由趣創者計劃參與者主筆的特邀論文外，也歡迎其他學者、學生或中小學教師提交有關「學習興趣」、「創造性活動」和/或「學習習慣」的概念性論文(conceptual papers)或研究實證論文（只要跟這三大主題的至少一項相關即可）。論文報告將採取精簡方式（時間限制在約每篇 15 分鐘以內），以保留時間進行針對上述三大主題的分組討論及全場總結。

　　工作坊的開放論文徵集活動，接受下列內容的論文提交：

- 有關學習興趣、創造活動和/或學習習慣的理論或概念性探討（即 conceptual paper）
- 打造學習興趣、創造活動和/或學習習慣的科技/學習環境，和/或教學法
- 分析可提升或妨礙學習興趣、創造活動和/或學習習慣的生態條件（如教育體系和政策、教學方法、知識論、科技設施、社會觀念等）
- 教師或家長在學生發展學習興趣、創造活動和/或學習習慣方面所扮演的角色
- 針對學習者的學習興趣、創造活動和/或學習習慣的評價或測量（如：問卷調查、個案研究等）
- 學習興趣、創造活動和/或學習習慣的社群（共同體）及文化視角（如：合作學習、學習者身份(identity)的建立或認同等）
- 其他與學習興趣、創造活動和/或學習習慣相關的話題或研究

論文提交：

本工作坊歡迎學者、學生或中小學教師提交長論文（8 頁）或短論文（4 頁）；學術性或教學實踐論文均可。論文可以以中文或英文撰寫。請在截止日期前將論文提交至 lhwong.acad@gmail.com，電郵標題為「IDC 工作坊論文提交」。論文格式請參考大會論文格式要求([Chinese] [English])。

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工作坊共同主席：

陳德懷（臺灣，中央大學）
黃龍翔（新加坡，南洋理工大學）
李　平（香港，香港教育學院）
呂賜杰（新加坡，南洋理工大學）
陳文莉（新加坡，南洋理工大學）
張立杰（臺灣，中央大學）
江紹祥（香港，香港教育學院）

附錄一："趣創計畫"參與者

*總召集人：*陳德懷（臺灣，中央大學）
小組召集人：
呂賜傑（概論）（新加坡，南洋理工大學）
黃龍翔（興趣）（新加坡，南洋理工大學）
陳德懷（創造）（臺灣，中央大學）
陳文莉（習慣）（新加坡，南洋理工大學）
（其他參與者依英文姓氏排列）
張立杰（臺灣，中央大學）、陳志洪（臺灣，元智大學）、鄭年亨（中國大陸，華中師範大學）、顧小清（中國大陸，華東師範大學）、黃榮懷（中國大陸，北京師範大學）、Heisawn Jeong（韓國，翰林大學）、龔仁崇（香港，香港教育學院）、江紹祥（香港，香港教育學院）、Rachel Lam （新加坡，南洋理工大學）、Ok-Hwa Lee （韓國，忠北大學）、李平（香港，香港教育學院）、李燕燕（中國大陸，北京師範大學）、劉晨鐘（臺灣，中央大學）、廖長彥（臺灣，中央大學）、Sahana Murthy（印度，印度理工學院孟買分校）、緒方廣明（Hiroaki Ogata，日本，九州大學）、大島純（Jun Oshima，日本，靜岡大學）、蘇孝正（Hyo-Jeong So, 韓國，浦項科技大學）、杉本雅則（Masanori Sugimoto，日本，北海道大學）、王敏紅（香港，香港大學）、黃淑鑾（馬來西亞，博特拉大學）、吳龍凱（新加坡，南洋理工大學）、于富雲（台灣，成功大學）

附錄二：「趣創者理論」摘要

Asian researchers who desire to bring about a significant impact on education will face a great barrier to resistance: a considerable part of formal education in Asia remains "examination-driven". Across Asia, educational practice is largely governed by the short-term goal: obtaining high scores on public examinations. This leads to an over-emphasis on cognitive outcomes, resulting in some severe drawbacks: learning and teaching are distorted; many students do not enjoy learning; it is difficult for students to develop 21st century competencies.

The 21st Century, however, marks an era of exponential change. Our world demands from its citizens a lifetime of creative and critical thinking, perpetually delivering innovations, productivity and new values to thrust social and economic development. Have our societies, schools and families found the right ways to prepare the young generation for the 21st century?

IDC Theory is a macro-level theory to guide design and research, intending to impart a broad and lasting impact on educational practices that will lead to a form of *quality education* in the twenty-first century. The theory hypothesizes that, with the support of technology, *driven by interest,* our students can be *engaged in creation* of knowledge or things, and, by repeating this process in their daily learning activities, their *learning habits* are being developed, our future generations will become *lifelong interest-driven creators*. In short, IDC theory suggests how to nurture our young learners as lifelong interest-driven creators *by engaging them to create with strong interests habitually.*

In IDC theory, the three concepts——*interest, creation, habit*——are regarded as "anchored concepts", with which designers can begin a design while the detailed parts or components of these concepts are revealed and dealt with progressively in the design process. For each anchored concept, a loop illustrates its components in a circulated process. These three loops are interconnected in a variety of ways when designing learning activities.

The *interest loop* consists of three components, *triggering interest*, *immersing interest*, and *extending interest* (Figure 1). "Triggering interest" concerns designing a pre-activity that induces interest in the forthcoming learning activity. Because curiosity, mainly evoked in humans by gaps in knowledge, is a desire to know, arousing curiosity is perhaps the general design strategy for triggering interest. "Immersing interest" pertains to designing learning activities that engage the full attention of students. The main design strategy related to this component is enabling learners to be immersed in the learning activity. Thus, the learners will fully enjoy tackling the task at hand while devote more attention to stretch their skills to confronting challenges arisen, resulting in personal development and growth as well as feelings of competency and efficacy. "Extending interest" relates to designing a post-activity to extend student interest in the domain after immersion in the learning activity. It predisposes students to reengage in similar activities when the opportunity arises for deepening or broadening their knowledge or skills about the subject in the future.
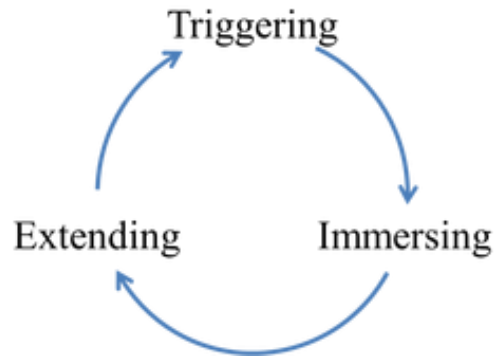
Figure 1: The Interest Loop

For the *creation loop*, we view that learning is creating, and creating is learning. Creation or creativity is not mysterious capability, limited to a small group of people who are labeled as geniuses. Indeed, in the long history of human development, humans themselves are natural and genuine creators——observing how other people do things and then mimicking themselves; using tools and creating tools; communicating with each other via gestures (initially in the ancient times), then via oral language, then via written language, and, now, via digital media. Given this view of learning, "creation" consists of three components——*imitating* (observing others, adopting examples, or absorbing information through any means to mimic or emulate somebody or something), *combining* (synthesizing the thought or ideas of others and the self's own to form something different or new), and *staging* (displaying products, presenting new thoughts, or demonstrating achieved outcomes to others) ——forming the *creation loop* (Figure 2).
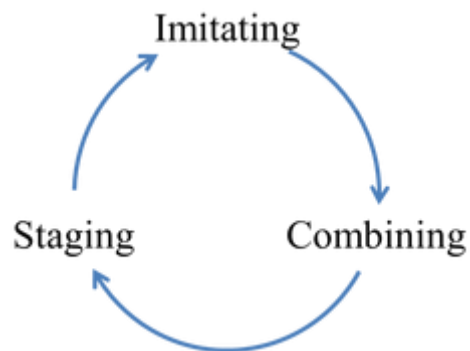

Figure 2: The Creation Loop

Habit loop is needed because learning driven by interest with process mimicking in the creation process will produce no lasting effect on students unless it is repeated regularly in daily learning activities. To exert a long-term impact on student learning, a natural way is to cultivate creation with interest as a habit, desirably a lifelong habit. "Habit", the third anchored concept of IDC theory, speaks of nurturing habits of creation. If students learn with interest incessantly and habitually (as when following a school timetable that regulates daily routines), and their learning process emulates the creation process, then students will become creators, lifelong IDCs. The habit concept consists of two components: *routine*

(repetitive pattern of activities) and *triggering environment* (arrangement of place, time, people, or incidents), forming the *habit loop* (Figure 3).
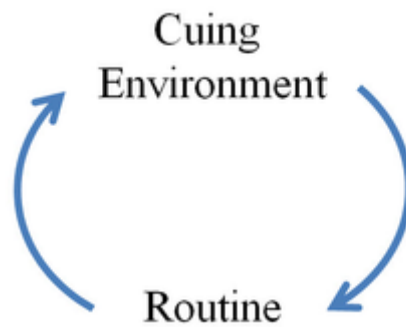
Figure 3: The Habit Loop

With IDC theory underlying the design of the learning process, with proper support of technology in the 21st Century, we hypothesize that most students will become lifelong learners, enjoying and gaining a sense of achievement throughout life. Moreover, they will excel in cognitive performance, exceeding the standards in public examinations. Thus, if we can validate this hypothesis by designing compelling cases that embody the IDC theory, the disadvantages of examination-driven education will be lessened and school education will undergo fundamental transformation. At the least, a more favorable balance between examination-driven education and "quality education" in Asia will emerge.