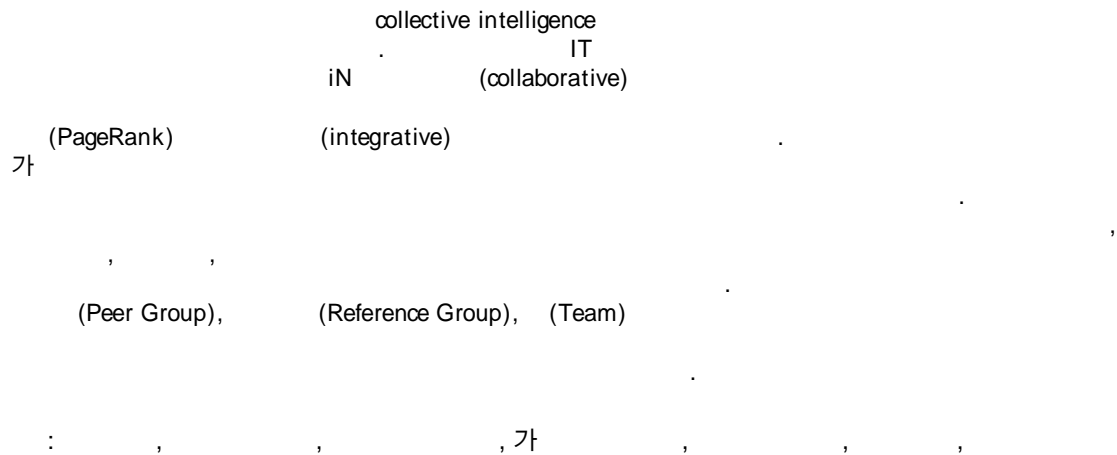


## A New e-Learning System Based on Integrative Collective Intelligence

Yoon, Wan Chul · Yi, Mun Yong



Collective Intelligence (CI) refers to the capability of human communities by which information offered by multiple individuals can be put together into useful forms for the benefit of the community. CI, while commonly implemented via IT (Information Technology), varies from collaborative CI, which is built on the basis of direct collaboration among the participants (e.g., Wikipedia or Naver's Knowledge Man), to integrative CI, which produces new forms of knowledge by combining independent and distributed information through highly advanced technologies and algorithms (e.g., Google's PageRank). In relation to education, CI has made various contributions, but most of them have been limited to the creation of relatively simple collaborative CI applications while not much effort has been made to apply it to the creation of more technically sophisticated integrative CI applications. Going beyond the extant paradigm of e-learning systems that simply utilizes CI for the gathering of learning materials, this paper introduces a new e-learning system that integrates and analyzes the information about learners' learning activities, learning paths, learning processes, and learners' prior knowledge and interests so as to produce social dynamics, through which competition and collaboration among the system users are encouraged and facilitated. By affording its users to implicitly and explicitly interact with other system users who belong to the same virtual peer group, reference group, and study team, this integrated CI-based e-learning system is expected to not only alleviate the persistent problem of low study motivation commonly associated with traditional e-learning systems, but also provide a new perspective on how CI can be utilized for e-learning.

**Keywords:** Collective intelligence, E-learning system, Integrative collective intelligence, Virtual peer group, Study caravan, Study team, Pheromone

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 (Malone, 2006; Surowiecki, 2004; Tapscott and Williams, 2008).  
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 (Leadbeater, 2009; Libert and Spector, 2010; Surowiecki, 2004).  
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3. (Study Team) (Study Squad)

가 가 (3~8 ) (Depth vs. Coverage Level vs. Comprehensiveness) (Cuéllar and Pegalajar, 2011).

가 가 가 가 (Virtual Peer Group)

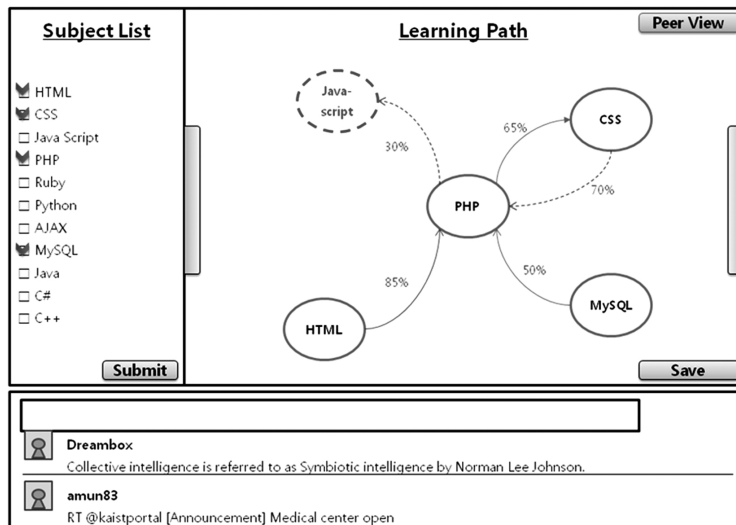
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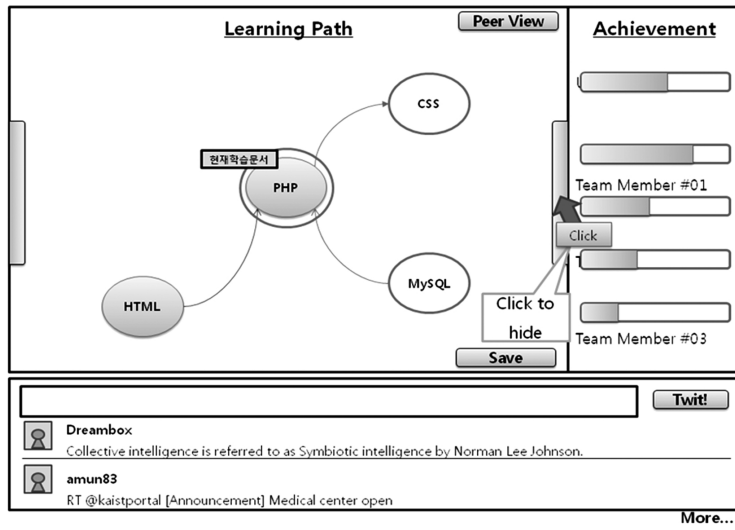
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History	Keywords	Peer View	Doc. Description	Wish List
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### VII.

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Java

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## VIII.

(Reference Group), (Peer Group), (Team)

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(Yoon, Wan Chul)

1988 ~ : KAIST

IFAC Human-Machine Systems TC Chair

: , . HCI,

E-mail: wcyoon@kaist.ac.kr

Tel: +82-42-350-3119

Fax: +82-42-350-3110



(Yi, Mun Yong)

2009 ~ : KAIST

1998 ~ 2009: University of South Carolina

International Journal of Human-Computer Studies

Associate Editor

AIS Transactions on Human-Computer Interaction

Associate Editor

: , , IT Training,

HCI

E-mail: munyi@kaist.ac.kr

Tel: +82-42-350-1613

Fax: +82-42-350-1610