Method And System For Dynamically Optimized Courses of Learning

PRIORITY CLAIM

[001] This application claims priority from Singapore Patent Application No. 10201505840U filed on 27 July 2015.

TECHNICAL FIELD OF DISCLOSURE

[002] The following discloses method and system arrangements for dynamically optimized courses of learning.

BACKGROUND

[003] A number of scientific research studies exist which document and describe experiments of techniques and methods that improve learning. Also exist are a number of scientific research studies which describe techniques and frameworks to measure the effectiveness of learning. However, learning environments and even individual learner circumstances are oftentimes very unique. What may be highly effective in a laboratory under controlled settings or in a particular experiment in the field for a particular learner or a particular group of learners may not be translatable to different types of learners in different settings.

[004] Thus, what is needed is a method and system for dynamically evolving courses of learning in accordance with various specific learning environments to optimize cerebral learning and learning effectiveness.

SUMMARY

[005] According to a first aspect of the present disclosure, there is provided a method for dynamically optimized course of learning, the method comprises creating a learning environment profile of target learners of a target course, wherein the learning environment profile comprises one or more sets of data collected from the target learners and from one or more teachers of the target course; establishing a plurality of parameters for optimizing cerebral learning for the target learners in response to the one or more sets of data; optimizing the course of learning in accordance with the plurality of parameters; presenting the optimized course of learning on one or more of the target learners; measuring the cerebral learning of the one or more target learners of the optimized course of learning to arrive at an

effectiveness feedback (EFK) of the plurality of parameters; and refining the plurality of parameters to dynamically optimize the course of learning when the effectiveness feedback falls below a predetermined threshold, wherein the plurality of parameters comprise: goal of the target course, self-organization strength, adaptive practice possibility, form and/or possibility of recalling learned knowledge, possibility of spacing the learning, mixing the topics of study, possibility of learning with friends, application of the knowledge learned in the target course beyond the target course, and connecting learned knowledge with present or future situations.

[006] According to a second aspect of the present disclosure, there is provided a system for dynamically optimized course of learning. The system comprises at least one target learner and is configured to create a learning environment profile of target learners of a target course provided by an organization, wherein the learning environment profile comprises one or more sets of data collected from the target learners, from the organization and from one or more teachers of the target course; establish a plurality of parameters for optimizing a cerebral course of learning for the target learners in response to the one or more sets of data; optimize the course of learning in accordance with the plurality of parameters; present the optimized course of learning on one or more of the target learners; measure the cerebral learning of the one or more target learners of the optimized course of learning to arrive at an EFK of the plurality of parameters; and refine the plurality of parameters to dynamically optimize the course of learning when the effectiveness feedback falls below a predetermined threshold, wherein the plurality of parameters comprise: goal of the target course, self-organization strength, adaptive practice possibility, form and/or possibility of recalling learned knowledge, possibility of spacing the learning, mixing the topics of study, possibility of learning with friends, application of the knowledge learned in the target course beyond the target course and connecting learned knowledge with relevant present or future situations.

BRIEF DESCRIPTION OF THE DRAWINGS

[007] The accompanying figures, where like reference numerals refer to identical or functionally similar elements throughout the separate views and which together with the detailed description below are incorporated in and form part of the

specification, serve to illustrate various embodiments and to explain various principles and advantages in accordance with a present embodiment.

[008] Fig. 1 shows a flowchart 100 depicting steps of a method for dynamically optimizing courses of learning.

[009] Fig. 2 shows bar graphs 200 and 250 illustrating experimental results according to a first experiment of Example 2 of the dynamically optimized course of learning.

[010] Fig. 3 shows a bar graph 300 illustrating experimental results according to a second experiment of Example 2 of the dynamically optimized course of learning.

[011] Fig. 4 shows bar graphs 400 and 450 illustrating experimental results of Example 4 of the dynamically optimized course of learning.

Claims

1. A method for dynamically optimizing a course of learning, the method comprising:

creating a learning environment profile of target learners of a target course, wherein the learning environment profile comprises one or more sets of data collected from the target learners and from one or more teachers of the target course;

establishing a plurality of parameters for optimizing cerebral learning for the target learners in response to the one or more sets of data;

optimizing the course of learning in accordance with the plurality of parameters;

presenting the optimized course of learning to one or more of the target learners;

measuring the cerebral learning of the one or more target learners of the optimized course of learning to arrive at an effectiveness feedback (EFK) of the plurality of parameters; and

refining the plurality of parameters to dynamically optimize the course of learning when the effectiveness feedback falls below a predetermined threshold, wherein the plurality of parameters comprise: goal of the target course, self-organization strength, adaptive practice possibility, form and/or possibility of recalling learned knowledge, possibility of spacing the learning, mixing the topics of study, possibility of learning with friends, application of the knowledge learned in the target course beyond the target course, and connecting learned knowledge with present or future situations.

2. The method in accordance with claim 1, wherein the one or more sets of data collected from the target learners and the one or more teachers of the target course comprise one or more profiles of any one or more of: the target learners, objectives, the one or more teachers of the target course, and tools.

3. The method in accordance with claim 1 or 2, wherein the one or more sets of data further comprise one or more profiles of an organization that provides the target course.

4. The method in accordance with any of claims 1 to 3, wherein optimizing the course of learning in accordance with the plurality of parameters comprises selecting the course of learning from a plurality of predetermined courses of learning.

5. The method in accordance with claim 2, wherein the one or more profiles of the target learners comprise demographic information including age, prior education background, prior background in the target course, amount of time devoted to learning the target course, profile of time devoted to learning the target course, physical location of the target learners, learning style of the target learners, motivation level of the target learners, and learning objective of the target learners.

6. The method in accordance with claim 2, wherein the one or more profiles of the objectives comprise information including objective of the target course and/or expected capability that the target learner will gain from the target course.

7. The method in accordance with claim 3, wherein the one or more profiles of the organization comprise information including the organization's objective for the target course, the resource available to support the course such as: time, technology, financial support and people and the organization's criteria for assessing the success of the target course.

8. The method in accordance with claim 2, wherein the one or more profiles of the one or more teachers of the target course comprise demographic information including the one or more teachers' objectives, teaching time, background and/or formal instruction in teaching, extent of knowledge of the target course, effectiveness as a facilitator, and possibility of physical presence at the target course.

9. The method in accordance with claim 2, wherein the one or more profiles of the tools comprise information including available tools, technology devices, internet access and/or physical spaces to support learning.

10. A system for dynamically optimizing a course of learning, wherein the system comprises at least one target learner and is configured to:

create a learning environment profile of target learners of a target course provided by an organization, wherein the learning environment profile comprises one or more sets of data collected from the target learners, from the organization and from one or more teachers of the target course;

establish a plurality of parameters for optimizing a cerebral course of learning for the target learners in response to the one or more sets of data;

optimize the course of learning in accordance with the plurality of parameters;

present the optimized course of learning to one or more of the target learners;

measure the cerebral learning of the one or more target learners of the optimized course of learning to arrive at an effectiveness feedback (EFC) of the plurality of parameters; and

refine the plurality of parameters to dynamically optimize the course of learning when the effectiveness feedback falls below a predetermined threshold, wherein the plurality of parameters comprise: goal of the target course, self-organization strength, adaptive practice possibility, form and/or possibility of recalling learned knowledge, possibility of spacing the learning, mixing the topics of study, possibility of learning with friends, application of the knowledge learned in the target course beyond the target course and connecting learned knowledge with relevant present or future situations.

11. The system in accordance with claim 10, wherein optimizing the course of learning in accordance with the plurality of parameters comprises selecting the course of learning from a plurality of predetermined courses of learning.

12. The system in accordance with claim 10 or 11, wherein the one or more sets of data collected from the target learner, the organization and one or more teachers of the target course comprise one or more profiles of any one or more of the target learners, objectives, the organization, the one or more teachers of the target course and tools.

13. The system in accordance with claim 12, wherein the one or more profiles of the target learner comprise demographic information including age, prior education background, prior background in the target course, amount of time devoted to learning the target course, profile of time devoted to learning the target course, physical location of the target learners, learning style of the target learners, motivation level of the target learners, and/or learning objective of the target learners.

14. The system in accordance with claim 12 or 13, wherein the one or more profiles of the objectives comprise information including objective of the target course and/or expected capability that the target learner will gain from the target course.

15. The system in accordance with any of claims 12 to 14, wherein the one or more profiles of the organization comprise information including the organization's objective for the target course, the resources available to support the course, such as time, technology, financial support and people, and the organization's criteria for assessing the success of the target course.

16. The system in accordance with any of claims 12 to 15, wherein the one or more profiles of the one or more teachers of the target course comprise demographic information including the one or more teachers' objectives, teaching time, background and/or formal instruction in teaching, extent of knowledge of the target course, effectiveness as a facilitator, and possibility of physical presence at the target course.

17. The system in accordance with any of claims 12 to 16, wherein the one or more profiles of the tools comprise information including available tools, technology devices, internet access and/or physical spaces to support learning.