

2nd Eurasian Conference on Educational Innovation 2019 (ECEI 2019)

January 27 - 29, 2019, Singapore

Organized by:

International Institute of Knowledge Innovation and Invention(IIKII)
The International Society of Educational Research (iSER)
National Taiwan Normal University Science Education Center

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Welcome

Welcome to the 2nd Eurasian Conference on Educational Innovation 2019 (ECEI 2019) . This conference is the first attempted collaboration among International Institute of Knowledge Innovation and Invention (IIKII), The International Society of Educational Research (iSER), National Taiwan Normal University Science Education Center in organizing an interdisciplinary conference in the area of science and engineering technolo-gists.

ECEI 2019 provides a unified communication platform for researchers in a wide area of topics from K-12 Education, University/College Education, Cognitive, Affective, and Social Aspects of Teaching and Learning, Teacher Training/ Education, Professional Development, Curriculum Development, Educational Measurement, Evaluation, and Assessment, Cooperative/Collaborative Learning and Environments, Problem/Project Based Learning, Didactic/Pedagogical Issues, STEM Education, Teaching/Learning Strategies, Methodologies for Educational Research, Metaphors, Analogies, Models, Animations or Simulations in Teaching and Learning, Instructional Design News, Distance Education, E-Learning, Educational Technology, ICT in Education, Blended Learning, Knowledge Management, Learning Management Systems, Human Computer Interactions, Web 2.0 Tools for Education, Other Fields About Education, Educational Innovation: Ethics and Values, Educational Innovation: Literature and Media, Educational Innovation: Philosophical Investigations, Educational Innovation: Religious Perspectives and Projects and other related fields. Our aim is to enable interdisciplinary collaborations among a diverse group of teach-ers, educators, engineers and technologists, from across multiple disciplines, for a generation filled with new ideas, collaboration potentials and business opportunities.

ECEI 2019 received a total of 313 submissions, with 231 papers finally selected and registered for this conference. We are happy to say that it is a fine starting point for establishing an international network to facilitate future science and engineering technologists in the academic and industrial fields.

I would like to express my sincere gratitude to the participants and committee members for making this event possible. I welcome you all to share in this conference, as an opportunity to make new unforgettable learning experiences and colleagues. Friends, welcome to ECEI 2019!



Prof. M. Fatih TAŞAR, Ph.D
Program Chairman of ECEI 2019
January 28, 2019

Conference Topics:

- (A) K-12 Education
- (B) University/College Education
- (C) Cognitive, Affective, and Social Aspects of Teaching and Learning
- (D) Teacher Training/Education
- (E) Professional Development
- (F) Curriculum Development
- (G) Educational Measurement, Evaluation, and Assessment
- (H) Cooperative/Collaborative Learning and Environments
- (I) Problem/Project Based Learning
- (J) Didactic/Pedagogical Issues
- (K) STEM Education
- (L) Teaching/Learning Strategies
- (M) Methodologies for Educational Research
- (N) Metaphors, Analogies, Models, Animations or Simulations in Teaching and Learning
- (O) Instructional Design News
- (P) Distance Education
- (Q) E-Learning
- (R) Educational Technology
- (S) ICT in Education
- (T) Blended Learning
- (U) Knowledge Management

- (V) Learning Management Systems
- (W) Human Computer Interactions
- (X) Web 2.0 Tools for Education
- (Y) Other Fields About Education
- (Y1) Educational Innovation: Ethics and Values
- (Y2) Educational Innovation: Literature and Media
- (Y3) Educational Innovation: Philosophical Investigations
- (Y4) Educational Innovation: Religious Perspectives and Projects

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Organizers

International Institute of Knowledge Innovation and Invention(IIKII)

The International Society of Educational Research (iSER)

National Taiwan Normal University Science Education Center

Sponsors

National Taiwan Normal University Science Education Center

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2nd Eurasian Conference on Educational Innovation 2019

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Leo Aleksander SIIMAN, University of Tartu

Hao-Chuan WANG, University of California

Sessions

- (A) K-12 Education
- (B) University/College Education
- (C) Cognitive, Affective, and Social Aspects of Teaching and Learning
- (D) Teacher Training/Education
- (E) Professional Development
- (F) Curriculum Development
- (G) Educational Measurement, Evaluation, and Assessment
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- (X) Web 2.0 Tools for Education
- (Y) Other Fields About Education
- (Y1) Educational Innovation: Ethics and Values
- (Y2) Educational Innovation: Literature and Media
- (Y3) Educational Innovation: Philosophical Investigations
- (Y4) Educational Innovation: Religious Perspectives and Projects
- (IV1) Urban and Environmental Engineering Science

Keynote Speakers



Chun-Yen Chang, Ph.D

Chair Professor

57th Academic Award of Ministry of Education, Taiwan

Director of Science Education Center

National Taiwan Normal University



M. Fatih TAŞAR, Ph.D

Professor, Science Education, Gazi University, Ankara, Turkey
President, iSER - The International Society of Educational Research
Editor-in-chief, EURASIA J. of Math., Sci. & Tech. Ed.
Co-Editor, Eurasian J. of Phys. & Chem. Ed.

Innovation and Entrepreneurship: Thinking out of the box

Abstract:

‘Thinking out of the box’ is to think imaginatively, freely and without being trapped by traditional constraints. Those who engage in such activities are innovators. They add value to existing products or create whole new products. ‘Entrepreneurship,’ on the other hand, is to starting a business by often taking monetary risks. In most cases, perhaps, innovators and entrepreneurs are different people. Entrepreneurs, usually hiring the innovators and providing them means and facilities, take any financial risks with the belief that innovations introduced into the market will attract consumers and in turn will gain profit. Today, we also see innovator entrepreneurs, as well. They may engage in founding, what is called, a startup company by themselves if they can also secure funds to start stages leading to production. The most important ingredient during this process is to come up with a product idea in material or as a service and a viable business model.



Prof Dr Jose Nandhikkara CMI

**Editor-in-Chief of Journal of Dharma, Regional Director Globethics.net India,
Professor of Philosophy, Dharmaram Vidya Kshetram and Christ University,
Bangalore, India.**

Rev Jose Nandhikkara, a Catholic Priest belonging to Carmelites of Mary Immaculate, is Professor Philosophy, Dharmaram Vidya Kshetram (DVK) and Christ University, Bangalore, Chief Editor of the Journal of Dharma, Regional Director of Globethics.net India, and International Fellow of KAICIID, Vienna. He was formerly Dean of the Faculty of Philosophy at DVK, Head of the Department of Philosophy and Theology at Christ University and Director of the Centre for the Study of World Religions. He is a Wittgenstinian scholar who contributes in the fields of Philosophical Anthropology, Ethics, and Comparative Religion. He has an excellent academic record, with three Bachelor degrees in Philosophy, Geology, and Theology, Licentiate in Philosophy from Gregorian University, Rome, MA in Philosophy and Theology from Oxford University, and PhD in Philosophy from Warwick University, UK. Prof Nandhikkara has authored a book, edited five volumes, and contributed over fifty research articles. He has also organised and presented research papers in the fields of Philosophy, Ethics and Religions in National and International Conferences in India and abroad.

Educational Innovations: Ethical Interface

UNESCO identified the four pillars of learning: 1. Learning to know, providing cognitive tools required to better comprehend the world and its complexities, 2. Learning to do, providing skills to effectively participate in the global economy and society, 3. Learning to be, enabling individuals to develop maximum their potentials, and 4. Learning to live together, enabling individuals and societies to live in peace and harmony. Learning Ethics and Values are necessary for the individuals to become fully human and to make the Knowledge Society that generates, shares and makes available knowledge to all members of the society ... to bring justice, solidarity, democracy, peace, also an Ethical Society, where people contribute to the building up of a just and compassionate society. As we move to the fourth industrial revolution, charged by the exponential growth of innovations and inventions in the fields of mobile technology, nano-physics, internet of things, genetics, robotics, etc., blurring and merging the distinction between real and virtual, physical and mental, biological and technical, intellectual and AI, etc. fundamental questions are raised in the aesthetic, moral, political and spiritual dimension of human life. The ever increasing economic, educational, digital, information and knowledge divides and the problems involved in the knowledge management in the local, national and global communities also challenge the noble goals of living together in harmony and well being of all. Increasingly we are aware of the fact that industrial revolutions do not bring in sustainable growth, development and happiness for all. When the world's knowledge and economic wealth is growing impressively, the scandal of inequalities, corruption, new forms of poverty and exploitations are on the increase. Human rights are often violated; multinationals pose threats to local industries and initiatives; international aid is used irresponsibly for selfish motives. Science and technology are to be complemented by arts, humanities, social sciences, and indigenous know-how and religious wisdom. In this inter-disciplinary educational innovations, ethics education is imperative for all disciplines. As ethics is fundamental to all of the judgements and practices that constitute the stream of life, Ethics education is to be integral part of Educational Innovations. In this presentation, I will first explore the fundamental nature of human beings as homo sapiens, homo economicus, homo politicus, etc. and argue that ethical interface is a necessary component of being human. I will then move to argue that though there is a profound scepticism regarding ethics in economics and politics, ethics is fundamental in all aspects of human life. We need ethically guided and aligned knowledge society where economics and politics are for the well being of all (third pillar of education). Personal and social ethics can make a positive difference in all fields human life and society including science, economics and politics, and ethics education is necessary for all stakeholders - teachers, students, professionals, institutions, etc. To be fully human, one needs to be ethical and as in all other significant aspects of human life, education is necessary to bring out this goal (fourth pillar of education).

Guidelines

1 Official Languages

The official language of ECEI 2019 is used only in English. All presentations including Q&A should be delivered in English.

2 Guideline for Participants

2.1 Conference Venue

National University of Singapore Society

9 Kent Ridge Drive Singapore 119241

2.2 Registration

Time of Registration:

January 27~29, 2019 10:00~ 17:00 (Kent Ridge Guild House)

2.3 Conference Kit

Conference kit, which contains final program, name badge will be provided to participants during check in at the Registration/ Information Desk.

3 Guideline for Presenters

3.1 The presenters and session chairs are asked to keep to the paper sequence as shown in the Final Program. By following this predefined schedule, participants can switch between sessions without missing the particular papers of interest.

3.2 The presentation time for each presenter is 10 minutes. The session chairs should allow the presenter for 7 minutes presentation and leave 3 minutes for discussions.

3.3 The presentation language of ECEI 2019 papers is used only in English.

3.4 Notebook PCs and LCD projectors will be available in every session room. Presenters are urged to prepare their files in MS PowerPoint format on a USB and copy the Conference into the PC at session room before the session begins. Our session aids will assist the presenters to copy the file. If you wish to use your own notebook PC, please open the file before your presentation time.

3.5 For unexpected events that cannot be handled on the spot, you may request through session chairs, session aids or make a direct notification to the Conference Secretary Desk.

Conference Agenda

Venue: National University of Singapore, Singapore

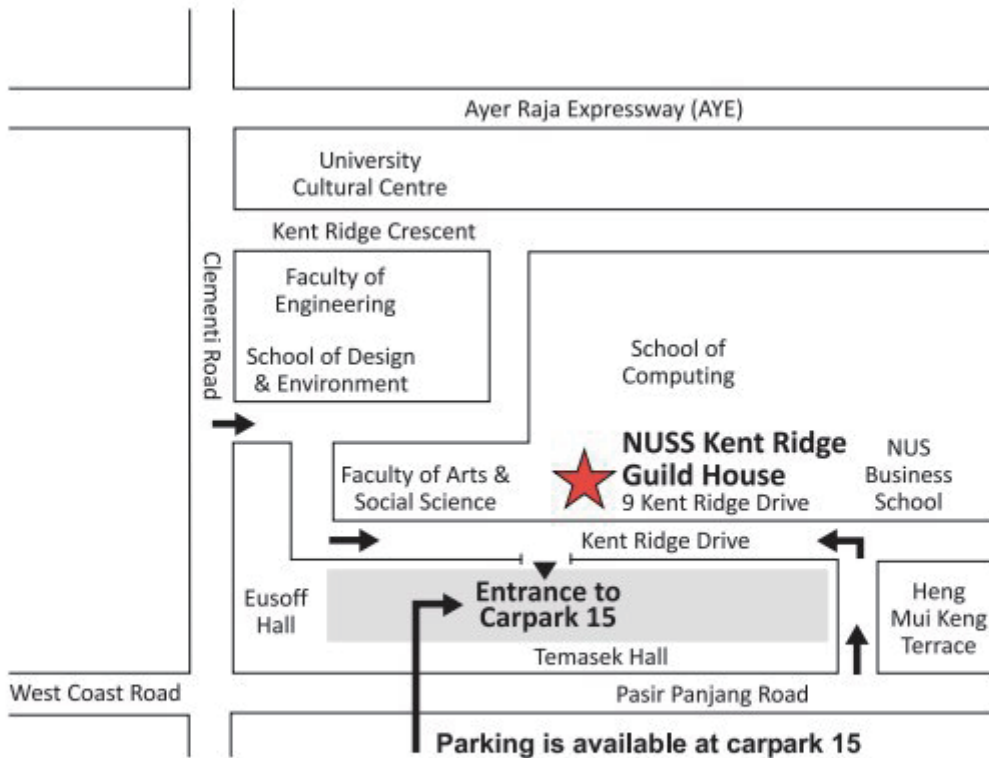
Language: English

Pre-Conference Schedule		
Sunday, January 27th, 2019		
10:00	17:00	Conference Registration & Sponsor Showcase (Ballroom)
Main-Conference Schedule		
Monday, January 28th, 2019		
08:30	09:00	Conference Registration and Conference Information Collection
09:00	09:50	Opening Ceremony
09:50	10:00	Tea Break
10:00	10:50	Keynote Speech 1
11:00	12:00	Keynote Speech 2
12:10	13:30	Lunch
13:00	17:00	Poster session
13:00	17:00	Oral session A1-A4, Oral session B1-B4
18:00	20:00	Conference Dinner & Closing Ceremony & awards for best papers
Main-Conference Schedule		
Tuesday, January 29th, 2019		
09:00	10:00	Conference Registration and Conference Information Collection
09:30	12:00	Oral session A5-A6
12:00	13:00	Free time
13:00	17:00	Oral session A7-A10 & Closing Ceremony

Venue

Kent Ridge Guild House
9 Kent Ridge Drive Singapore 119241

Map of Kent Ridge Guild House | 9 Kent Ridge Drive | Singapore 119241



- BY BUS**
Kent Ridge Terminal : 10, 33, 95, 151, 151E, 189, 200
Heng Mui Keng Terrace : 10, 30, 30e, 51, 143, 183, 188, 200
Bus Shuttle Service : A1, B, D2, BTC1
- BY MRT**
Nearest Station: Kent Ridge
- BY CAR**
Park at carpark 15 from Clementi Road / Pasir Panjang Road



Oral Schedule

Monday, January 28th, 2019		
Venue	Oral session A	Oral session B
13:00~14:00	A1	B1
	M190052-G	M190144-Y
	M190131-G	M190201-Y
	M190150-G	M190207-Y
	M190214-G	M190236-Y
	M190255-G	M190257-Y
14:00~15:00	A2	B2
	M190232-P	M190139-Y
	M190241-P	M190059-C
	M190124-X	M190066-C
	M190047-U	M190107-C
		M190135-C
15:00~16:00	A3	B3
	M190046-H	M190108-C
	M190065-H	M190197-C
	M190096-H	M190200-C
	M190210-H	M190223-C
	M190053-H	M190242-C
16:00~17:00	A4	B4
	M190010-H	M190074-K
	M190035-H	M190086-K
	M190031-J	M190219-K
	M190102-Y	M190234-A
	M190099-Y	M190235-A
16:00~17:00	A5	B5
	M190160-IV1	
	M190273-IV1	
	M190274-IV1	
	M190216-G	

Tuesday, January 29th, 2019		
Venue	Oral session A	Oral session B
9:00~10:00	A6	B6
	M190269-L	M190140-R
	M190045-L	M190206-R
	M190023-L	M190209-R
	M190022-L	M190289-R
	M190204-L	M190208-N
10:00~11:00	A7	B7
	M190244-L	M190039-S
	M190277-L	M190019-S
	M190282-L	M190028-S
	M190218-I	M190006-S
	M190222-I	
11:00~12:00	A8	B8
	M190004-I	M190020-E
	M190017-I	M190288-E
	M190050-I	M190114-Y
	M190069-I	M190042-Y
	M190094-I	M190007-O
13:00~14:00	A9	B9
	M190070-IV1	M190054-Y
	M190151-IV1	M190063-Y
	M190193-IV1	M190071-Y
	M190195-IV1	M190136-Y
	M190247-IV1	M190083-Y
14:00~15:00	A10	B10
	M190026-W	M190087-Y
	M190055-W	M190089-Y
	M190153-W	M190113-Y
	M190164-W	
	M190220-W	
15:00~16:00	A11	B11
	M190003-M	M190116-Y
	M190041-M	M190118-Y
	M190205-M	M190308-Y
	M190012-H	M190075-Y
	M190015-H	M190137-Y
		B12
		M190016-B
		M190159-B
		M190043-B
		M190085-B
		M190189-B

Poster Schedule

Monday, January 28th, 2019				
Venue	Poster Session			
Number	13:00~14:00	14:00~15:00	15:00~16:00	16:00~17:00
01	M190029-A	M190239-V	M190149-J	M190121-K
02	M190105-A	M190109-W	M190073-J	M190064-K
03	M190051-B	M190030-W	M190184-F	M190279-K
04	M190157-B	M190061-W	M190084-F	M190283-K
05	M190138-B	M190165-W	M190081-F	M190284-K
06	M190123-B	M190166-W	M190146-F	M190088-K
07	M190014-B	M190021-W	M190302-F	M190309-K
08	M190033-B	M190285-W	M190093-F	M190090-L
09	M190243-B	M190303-W	M190126-H	M190091-L
10	M190100-B	M190300-W	M190142-H	M190095-L
11	M190233-B	M190307-W	M190229-H	M190098-L
12	M190101-B	M190254-X	M190018-I	M190027-L
13	M190264-B	M190057-Y	M190163-I	M190203-L
14	M190271-B	M190228-Y	M190196-I	M190224-L
15	M190278-B	M190156-Y	M190134-I	M190011-L
16	M190292-B	M190103-Y	M190036-I	M190038-L
17	M190314-B	M190082-Y	M190104-I	M190067-L
18	M190009-C	M190112-Y	M190194-IV1	M190068-L
19	M190048-C	M190251-Y	M190162-IV1	M190032-L
20	M190079-C	M190130-Y	M190185-IV1	M190286-L
21	M190049-C	M190266-Y	M190192-IV1	M190237-L
22	M190062-C	M190262-Y	M190249-IV1	M190290-L
23	M190230-C	M190260-Y	M190246-IV1	M190217-M
24	M190058-C	M190268-Y	M190212-IV1	M190161-M
25	M190110-C	M190263-Y	M190037-Q	M190148-M
26	M190092-D	M190056-Y	M190072-Q	M190276-M
27	M190265-D	M190281-Y	M190106-Q	M190252-U
28	M190253-D	M190301-Y	M190060-Q	M190256-U
29	M190305-D	M190311-Y	M190250-Q	M190306-U
30	M190316-D	M190005-Y	M190008-Q	M190191-R
31	M190013-N	M190080-E	M190312-Q	M190132-R
32	M190147-T	M190227-E	M190111-Q	M190024-Y
33	M190155-S			M190315-Y

Paper Abstract



M190003

A Study on the Preference of Female Office Workers for the Color of Automobile Interior

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Keywords: Female Office Workers, Lifestyle, Automobile Interior Color, Preference

Abstract:

With the evolvement of the era, females have more and more independent abilities of economy. Female drivers become a current trend so that it's hard to ignore the market for them. In a highly competitive automobile market, drivers usually spend much time in the car, so when purchasing cars, modern consumers not only consider dynamic performance, rein, energy saving and active passive safety integration, but also the style and the texture of the automobile interior design, which have distinctly important relation with the five senses. Among them, the color of automobile interior as a consumer's initial impression, it is easy to affect consumers' desire to buy. Female consumers' preference for the color of automobile interior is even more pronounced. Therefore, if the design of the color of automobile interior meets the needs of female consumers, it will make the female driver feel intimate and comfortable. It can also be used as a reference for the design of the automobile industry.

M190004

Using parametric design for Riemann surface-based construction

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Keywords: Riemann surfaces, minimal surfaces, parametric design, product design and construction, architecture

Abstract:

Riemann surfaces and the laws that govern them hold a particular fascination for mathematicians. However, it has taken the development of modern parametric platforms and digital construction technology for artists and designers to be able to start to exploit their particular characteristics and they remain under-explored in actual constructed designs. In this paper, we describe how Riemann surfaces provided both inspiration and a point of departure for a project that worked through to the actual construction of a Riemann surface-based model. This, in turn, offers insight into how Riemann surfaces might be drawn upon more broadly in design and provides a concrete instantiation of how digital technologies can facilitate previously challenging forms of cross-fertilization between mathematics, the sciences and design.

M190005

A Study on Theme category and Artistic Expression of Lacquer Painting in Ancient China

Kuo-Kuang FAN^{1,a} and Xue-Hui LI^{1,b}

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Keywords: Lacquer Painting in Ancient China, Theme category, Artistic Expression

Abstract:

The expression form of lacquer painting art in ancient China featured unique distinction in each past dynasty. The study will carry on research on the theme category and artistic expression of lacquer painting in ancient China by adopting historical approach and document analysis method. As shown by the research, the lacquer painting in ancient China was strongly interlinked to value orientation and aesthetical trend of the society at that time, as well as the users' status and living custom. The research and category on the expressive themes could effectively enhance the academic circle's comprehension on the lacquer painting in ancient China; and the analysis on the artistic expression of ancient lacquer painting could further present the indispensable role of this artistic form in the history of Chinese painting.

M190006

An Innovative Design Using ICT on Outdoor Education – AR-Integrated Learning Map (ARILM) Applied in Barclay Community Park

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Keywords: ICT, Augment Reality (AR), Technology Acceptance Model (TAM), AR-Integrated Learning Map (ARILM)

Abstract:

The learning characteristics of digital era are, ICT in everywhere, ICT in everything. Not only students use mobile technologies for learning knowledge in classes, but also the government and schools are trying to improve the learning motivation and creativity of students in setting ICT. Abundant ICT such as wireless environment, virtual reality (VR), augment reality (AR), as well as artificial intelligent (AI) now are applying to the courses and class. In Taiwan, a creativity number of primary schools introducing many ICT into creative design courses for years, and they are improving the creative design adopting new ICT continuously.

In education, using AR, users can load virtual text, images, video, or 3D content, and attach items to tracking markers or printed images to create AR scenes, in particular, outdoor education is limited with knowledge extension in the past, ICT such as AR is a good tool to improve this weakness. This study designs an AR-Integrated Learning Map (ARILM) applied in Barclay Community Park that incorporates information communication into outdoor education, by employing smartphones, tablet PCs, and wireless communication devices, students can use audiovisual navigation to create an educational setting in outdoor environments.

Technology Acceptance Model (TAM) was used in this study for addressing the ICT design and integration is successful. Three items are set for the external variables: system performance, material quality, and interaction operation. The characteristics of 190 students and their achievements and attitudes toward 8 weeks' science courses were analyzed. The analysis results indicated that all of the various paths in the TAM model were significant, the results of the model verification pointed out that the three variables: system performance, material quality, and interaction operation had a positive and significant impact on usefulness. This indicates that the higher the perceived usefulness of the ARILM, the higher the students' willingness to adopt the ARILM. Our evaluation also indicated that students' satisfaction with and willingness to adopt the ARILM have a significant positive influence on the system.

M190007

A Study on Crafts Design by Electroforming Controlling the Crystal Growth

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Keywords: Electroforming, Crystal growth control, Surface texture, Experimental analysis

Abstract:

With the development of the craftsmanship, nature, humanity, and handmade has become popular. Governments and civic operators are trying to combine the advantages of traditional craftsmanship and industrial design technique, using mass production and rapid processing, to develop an innovative process design model. For modern metalworking, now is the time for transformation.

In this study, an experimental analysis was used to develop handicrafts by electroforming. In view of crystal growth problem of electroformed handicrafts, observe the appearance of organic texture, find out the control conditions. The crystal growth arrangement was recorded to provide a control method for electroformed handicrafts.

The experimental results are as follows:

1. Crafts that require organic texture can be applied to the crystal growth electroforming.
2. Crystal gain deposits mainly accumulate at the edges and sharp of the mother mold.
3. Increased voltage will increase the number of crystal gain arrangements.
4. Short processing time the crystal grains are round, long processing time are coral-like.
5. The orientation of the mother mold affects the direction of grain deposition.
6. The rotation of the mother mold affects the rotation direction of the crystal grain.

This study mainly discusses the surface texture of handicrafts, the designer can select the process and condition according to requirements, to improve the better texture of crafts, so that crafts will have more possibilities in surface texture presentation.

M190008

Effect of Task-Driven Classroom Teaching on Students' Creative Thinking Performance

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Keywords: Task-Driven Classroom Teaching, Creative Thinking, Learning Performance

Abstract:

The arrival of the Internet era makes the information technology no longer base on computer theory. Instead, the new creative teaching method is used for innovative application. Therefore, the task-driven classroom teaching method is integrated into information technology courses of junior middle school by designing specific cases. From the theoretical knowledge teaching and the comprehensive operational practice teaching, we explore the influence of using task-driven classroom learning method on students' creative thinking achievements. The experimental results show that using task-driven classroom teaching method has significant positive correlation on student' learning performance, learning interest, and innovative thinking. This idea can stimulate the interest of learning and improve the comprehensive quality of students, thus it can promote the reform of information technology curriculum educational quality. For more detailed discussion, the results will be discussed in this paper.

M190009

The Visual Style Interpretation in Contemporary Taiwan: From a Viewpoint of Belief

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Keywords: fictional reality, cognitive revolution, faith, style

Abstract:

The human cognitive revolution makes it possible to discuss fictional stories that have not been seen and heard through graphs and words, and to co-operate with one another by believing something together, thereby expanding their communities and freeing themselves from the limits of ethnic growth. The basis of these fictional realities is belief, and religion is a manifestation of faith.

How does faith create a link with a place to shape a unique local image? What is the visual style of Taiwan, which has been baptized by different cultural backgrounds? What is the connotation? And what kind of state is it to show?

M190010

A Study on The Service Design of Convenience Store “FamilyMart” in Taiwan: From a Viewpoint of New Retail

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Keywords: Consumer Society, Consumer Experience, New Retail, Service Design, Marketing

Abstract:

In self-determination theory, there are six stages in the process from no motivation to intrinsic motivation, so that the service designer can cut through the concept of motive to add value to the existing service. From the manufacturing society to the information society in modern Taiwan, the industrial nature came to the innovation economy from the production economy, so far the user's concern is not only the "product" itself, but more importantly the value that the product can bring to the user. Therefore, to explore how to create a combination of service and product value network, the enterprise has a substantial strategic significance, become the key to success.

Ma Yun proposed " New Retail" at The Computing Conference 2016. Is it a new concept for convenience store "Family Mart" in Taiwan? How does the service design work and operate? What is the nature difference between Taiwan and China's convenience stores?

M190011

Constructing a Consensus Model of the Imageries of Green Household Appliances of Design Students

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Keywords: Consensus Model, Green Household Appliances, Means-End Chain, Zaltman Metaphor Elicitation Technique

Abstract:

In the category of design education, the effective transmission and understanding of knowledge are the key elements for the success of design practice. Although the design teaching method is two-way communication between teachers and students, cognitive gaps in teaching contents often occur, especially in a product design course. In order to achieve consistency in cognition and teaching, this research took green household appliances as the example, and applied the Zaltman Metaphor Elicitation Technique (ZMET) and the Means-End Chain Theory, in order to explore the experience and opinions of students in a design department. According to the analysis results, 27 common constructs were obtained, including 9 attributes, 10 consequences, and 8 values, and 3 major expectation dimensions were summarized, namely “environmental sustainability”, “use feeling”, and “life health”. Moreover, according to the consensus, the ACV connection model was confirmed. The results of this research can be provided to teachers as course guidance to develop green products and expand student’s opportunities to realize the specific goal of product design.

M190012

Beyond the Cooperative Learning: A Classroom Response System (CRS) Embedded into Marine Science Education Curriculum

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Keywords: Cooperative Learning, Classroom Response System, Field Trip

Abstract:

Cooperative learning allows students to learn together in their peers, support each other, express their opinions, and finally share the results. However, Releasing on the stage becomes a major obstacle for shy or introverted children. In order to assist all students to deliver their opinions and help teachers evaluate smoothly, this study used mobile devices to design coral reef teaching courses. Classroom Response System (CRS) was used to help teachers ask questions in class, promote discussions between the teacher and students, and successfully to conduct a field trip. The coral reef course was no longer limited to classroom cognitive education, but combined mobile devices and outdoor observations to provide students with a richer and more diverse learning experience.

The study found that using CRS and mobile devices for teaching can enhance students' learning interests and more than 90% of the students thought that using mobile devices to answer questions with less stress. In addition, more than 80% of the students felt the joy of teacher-student interactions. CRS did help to explore related teaching topics. However, when mobile devices are used in primary schools, students may be confused about interface design or unfamiliar operations, which may cause some students to have difficulties in using them. Teachers should assist in the individualized differences to maximize the effectiveness of teaching.

M190013

Study on Blend Coding System and Accordance of Animated Symbols and Text Content

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Keywords: Animation, Motion Graphic, Blend Coding, Animated Symbol

Abstract:

A typical application of animation is combined with text content to represent knowledge, as known as MG(Motion Graphic). So MG is a blend coding system of two types of symbols, animation always play the role of “dynamic illustration” to support text comment. However, people have been used to understand and operate dynamic graphics via digital devices, so text is not the only source of meaning. Animation has become independent symbol to produce more efficient recognition. How does the consistency between animation and text settle, and how to evaluate this effects has become an important issue in the production of animation. This study adopts experimental method to let sampled students watch different progressing bar animation clips and answer the questionnaire. The result indicates how different bias between animated shape and dynamic texts affects visual comfort and logical understanding. With comparison, further research suggests how visual elements of animation is encoded to represent logical meaning and types of bad blend coding with other symbols that should be avoided.

M190014

Developing a Family-centered Clinical Program in Occupational Therapy

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Keywords: family-centered, internship program, occupational therapy

Abstract:

Family-centered services have been reported to demonstrate many positive effects on families of children with disabilities in early intervention. The attitude and skill of family-centered services demonstrated by occupational therapists play an important role in promoting the outcome of early intervention. Most of the pediatric occupational therapists in Taiwan tend to provide child-centered practices for children with disabilities, but do not emphasize on the family-centered practice in early intervention. The clinical internship practice is a major trajectory to provide the opportunities for students of occupational therapy to enhance their clinical knowledge and skills prior to graduation. If the family-centered values are built into the clinical internship practice, students can have some experiences to collaborate with families.

Purpose: The purpose of this study is to describe the development of a family-centered internship program in the pediatric occupational therapy including the concepts of parent-professional collaboration and parental empowerment in Taiwan.

Method: A qualitative research design is designed to describe the development of a family-centered clinical internship program in a medical center in Taiwan. The initial development of the family-centered program was developed through literature review and an expert conference to formulate the structure of the educational program.

Results: A twelve-week educational internship program was designed. The program in conjunction with the core values of family-centered philosophy are identified as parent-professional collaboration and parent empowerment. The contents of the internship educational program consist of training courses, coaching strategies, students' self-reflection through video recording, and team conferences. Three domains of program outcomes will be included: students' value of family-centered concepts, and family outcomes and children's occupational performance.

Conclusion: The family-centered clinical internship program with practical contents is developed for further implementation to enhance parent-professional collaboration and parental empowerment.

M190015

Be WISer ! Using Collaborative Science Writing to Improve Taiwanese Students' Understanding of Evolution in Junior High School Classroom.

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Keywords: Collaborative Learning, WISE, Science Writing, Google Docs

Abstract:

With the fast-developed technology, Computer-Supported Collaborative Learning (CSCL) has become a trend in education. Unlike the traditional teacher-centered learning environment, CSCL enables students to scaffold their knowledge through peer discussions. Web-based Inquiry Science Learning Environment(WISE), an online platform, is a common CSCL tool applied in current school education. On the platform, Students will be encouraged to brainstorm ideas on an assigned scientific topic and finish a series of tasks together for improving subject-related knowledge and the ability of inquiry.

Nevertheless, it seems that WISE alone has limited ability to train students' science writing skills since it focuses more on ideas exchanging and lacks follow-ups such as summarizing and integrating all these valued ideas to constitute a consensus view. Thus, this research presents the feasibility of the application of Google docs, an online collaborative writing system, combined with WISE platform to create a better collaborative e-learning environment.

A total of 105 8-9th grade students from 3 junior high schools in Taiwan were selected and divided into two groups. In the group discussion process, students were required to write arguments or scenarios about evolution mechanisms proposed by Darwin and Lamarck. In the "Collaborative Writing Group", students co-edited the essay on the Google docs. However, in the "Single Writing Group", one of the students was elected to write the essay on Microsoft Word, and other students were responsible for giving oral advice. To assess learning effectiveness, all participants completed pre-test and post-test. The qualitative data contained semi-structured interviews and science essays.

According to the paired t-test and ANOVA analysis, the results shows that all students have a significant improvement in evolution concepts and inquiry ability. In addition, compared to "Single Writing Group", students in "Collaborative Writing Group" have better performance in evolution understandings. It reveals that peer-to-peer collaborative science writing is beneficial for students to build scaffolding and construct knowledge with each other.

M190016

Exploration of the Relationship among Cohesion, Knowledge Sharing, and Team Performance of Design Students during Graduation Project

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Keywords: cohesion, knowledge sharing, team performance, graduation project, design college

Abstract:

College students participating in a graduation project inevitably encounter communication problems during teamwork. Their team performance depends on good team interaction, which, however, can be promoted by knowledge sharing among the team members. Hence, this study focused on exploring the relationship among cohesion, knowledge sharing, and team performance in terms of their influence on student teams. A questionnaire survey was adopted to investigate 92 college design students, and the results were analyzed by PLS-SEM and SPSS. The analytical results showed that knowledge sharing in a team with greater cohesion had a positive influence on students' team performance, which was particularly evident in the three winning teams. Team meetings that were more frequent but shorter could improve the efficiency of the project production. On the other hand, by setting a number of small mutual goals during the process, team members could celebrate and share the joy of reaching these milestones, which in turn increased their cohesion.

M190017

To improve learning effect in mechanical component design by 3D printing—Assistive device design as an example

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Keywords: 3D Printing, Mechanical Component Design, Assistive Device Design, Questionnaire

Abstract:

The aim of mechanical component design, one of the core courses in mechanical engineering, is to teach students how to design products with both functionality and safety. This is a complex but challenging course including mechanical drawing, statics, dynamics, mechanics, and material mechanics. Due to the rapid advance in computer technology, currently utilization of computer aided technology in mechanical computer design can help students to show the product information quickly by virtual 3D design.

In this study, the difference in learning effect with or without utilization of 3D printing technology in mechanical component design will be evaluated. Originally the product design is completed by class teaching, memory of students, and computer aided drawing. In this case, the learning effect of students is influenced by personal knowledge and experience, spatial difference, virtual-real situational change barrier. In order to overcome these negative effects, a series of guided courses to design small-sized assistive devices will be planned. By utilization of 3D printing technology, the spatial difference and virtual-real situational change barrier will be abolished. During the course, students initially make 3D drawings, and then adjust the size of components by 3D printing to create the final product. In the end, the learning effect will be determined by the scores of final products and the questionnaire of students.

M190018

A 2D Dental Morphological Image Augmented to Assist Improving Traditional Hand Carving Skills in Dentistry

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Keywords: Plaster Carving Technology, AR Glasses, Questionnaires, Instructive 2D plane of tooth

Abstract:

The study was to explore learning effects of implementing augmented reality (AR) technology, 2D graphics of a dental standard morphology outlined as a superimposed visual guide, in comparison to a traditional carving cubic plaster stick using a physical tooth model. This traditional carving tooth needs repetitive practices while viewing and reproducing the standardized physical 3D tooth model side-by-side, according to its characteristics of the morphology on sight. This way of the direct visual comparison of the plaster stick carved for the morphology of each tooth provides an importance of practical teaching and learning for prosthodontic design and production in dentistry. However, picturing the detailed tooth model in 3D is sometimes difficulty for beginners, not able to effectively spatialize the given physical model, then directly affecting the final outcomes.

Therefore, the purpose of the study was to implement a self-developed see-through AR glasses that superimposes a given visual outline of the dental morphology in 2D, one of the five primary instructive 2D planes of teeth, directly onto the plaster stick ready to be carved for its outline figures. This visual outlined image superimposed on the stick seen through the AR glasses was to basically reduce a 3D spatial basis learning difficulties by providing an informative 2D visual assist of the dental plane for an early stage of carving learners in dentistry. The comparisons between the traditional dental carving and the AR based carving assistance would provide the results of the questionnaires given to the beginners of the study. By a means of the AR basis assisted technology, the dental skills in carving for the detailed morphology of teeth could be improved by augmenting a simplified 2D outlined dental image superimposed into the beginners' visualization during their carving practices.

M190019

The Implementation and Evaluation of a Friendly PC Game Development Tool

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Keywords: Game Design, Game making learning

Abstract:

The production of the game is a combination of professional skills such as planning, art and programming. If the game designer has a basic understanding of the art and program parts, the game will have better design and team integration. The professional game engine are used in PC game production like Unity. For design students, there are difficulties in understanding the program and its logic. If the program is written as an easy-to-use interface design, the designer can focus on the design work for game design and increase the effectiveness of learning. From this idea, this study develops a friendly PC game development tool on the professional game engine Unity and evaluates the teaching effect on the students. By comparing the questionnaire survey before and after using this tool to understand the impact of this tool on students, we can see from the questionnaire analysis that no matter in professionalism , teaching methods, teaching content and teaching effectiveness all have obvious progress.

M190020

Examining the Effectiveness of the DDDM-based Staff Education Framework: Evidence from a Training Course for Suggesting a Budget Allocation Decision for MALE UAV Design

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Keywords: professional education, research and development, budgeting, criteria evaluation, medium-altitude long-endurance unmanned aerial vehicle

Abstract:

Background. In terms of the theory of data-driven decision making (DDDM), a work published in 2018 proposed a scientific education framework for staff training, assisting a group decision on allocating the 'large but limited' budget effectively for next generation fighter R&D. Staffs were taught to launch a thorough literature survey to have the concise operational definitions for each design factor, establish and confirm a decision hierarchy using the Delphi method and investigate the individual opinions of the 'key men' using AHP, whilst group opinions w.r.t. the total goal or w.r.t. each construct were aggregated. Some interesting analyses were further made, as to understand the knowledge about the homogeneity (similarity) and heterogeneity (diversity) in the opinions. Objective and Methods. By following these, this study validates the framework and offers the first empirical application other than the initial one. A staff team aiming to unveil another set of knowledge related to the design factors for the medium-altitude long-endurance (MALE) unmanned aerial vehicle (UAV), is trained using the framework. The problem domain is different because the functions required by an UAV, which determine the design criteria, vary a lot from those by a fighter, even both are designed for military purpose. Results & Implications. The staffs established a tri-layer decision hierarchy and confirmed it using the Delphi method. A new set of decision knowledge for allocating the budget for designing the MALE UAV along a right way is discovered based on the information investigated and assessed from the key men using AHP. So, an empirical evidence for the effectiveness of the framework is shown from the successful application. Implications for the problem domain are also drawn. The results differ a lot from the probed set of knowledge for fighting aircraft design, e.g., the set of design criteria is greatly dissimilar, despite MALE UAV is also a 'next generation aircraft'. That is, comparing the design criteria and their weights for different next generation aircrafts are informative supplements for a country that wishes to design/produce a MALE UAV from the beginning.

M190021

Design of A Virtual Reality System based on Wireless Surface Electromyography Signals

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Keywords: surface electromyography, virtual reality, feature extraction, real-time control, rehabilitation training

Abstract:

The surface electromyography (sEMG) is a kind of bioelectrical signal generated by muscle fibers, which provides a lot of information related to muscle activities and movement states. The virtual reality (VR) is a kind of computer technology which can create virtual world. It can simulate real scene through various interactive interfaces. A VR real-time control system based on wireless sEMG was designed. The scene in VR was the kitchen at home. This system is mainly used for rehabilitation training of upper limb muscles.

The system was designed with sEMG acquisition module, software control module and VR environment module. The sEMG signals were collected from the subjects by a portable wireless sEMG acquisition module. The surface electrodes were placed on flexor carpi ulnaris muscle and extensor carpi ulnaris muscle. All data between electrodes and receivers were transmitted by a wireless way. The software control module consisted of four parts: real-time myoelectricity signal detection and segmentation, feature extraction, classification identification and control instruction. The mean square and moving average window method were used to segment sEMG signals. The absolute value of amplitude and singular value of wavelet coefficients were selected as sEMG features. Support vector machine was applied for model training and classification. Finally, the control of four movements in virtual kitchen was completed. The VR environment module driven to perform different actions according to instructions provided by the classification in virtual kitchen.

The experimental results showed that this system could perform the real-time control of virtual kitchen action. Myoelectricity signals of four movements including wrist flexion, wrist extension, fisting and palm extension could be identified effectively. The average offline identification accuracy was 94.50%, and the average online identification accuracy was 90.31%. The system can be used for muscle rehabilitation training, and provide immersive virtual kitchen scene, which is of positive significance to the rehabilitation of patients. It can also provide an assessment analysis of the muscle recovery of patients.

M190022

Exploring the Learning Benefits of Cloud Group Games in the Introduction to Computer Science in College

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Keywords: Game-based Learning, Interactive Response System, Flow, Learning Effectiveness.

Abstract:

The Introduction to Computer Science is a compulsory subject for freshmen in most universities in Taiwan; it mainly introduces theoretical knowledge such as basic computer applications. Therefore, most teachers only use traditional lectures to teach, learners are not willing to study theoretical courses, and in the end learning is only driven by tests. This study mainly investigated the cloud interactive response system as a group game teaching tool to develop the teaching model of cloud group games and apply the model to the Introduction to Computer Science to explore the learning benefits and experience of learners. The participants were four-year technical college students with multimedia design major, and the one-group pretest-posttest design was adopted to collect and analyze the data through quantification and a little qualitative analysis. The research results showed that learners had a positive feeling for the cloud interactive response system as a supplementary learning tool in class, their learning achievement was significant before and after the test, and the system was considered more interesting than traditional lectures, enabling the students to focus on the course. Therefore, they could interact and discuss with peers to understand the course content more. The study also proposed relevant suggestions and future research directions at the end of the paper for the reference of future research.

M190023

Applying 3D Drawing in Virtual Reality to Improve Students' Motivation of 3D Animation Learning

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Keywords: Virtual Reality, virtual reality drawing, ARCS, 3D Animation Learning

Abstract:

The concept of virtual reality (VR) began in the 1960s. Lanier (1989) defined the term virtual reality (VR), but because of the high price of early VR equipment, it was not universally applicable. After the Oculus DK1 came out in 2010, The development and application of VR has once again flourished.

The application of virtual reality in education has been going on for many years. Most of the previous researches used the virtual reality form in the desktop screen. Considering that learning 3D animation software is also simulating the 3D environment in the 2D computer screen, this experiment adopts 6DOF's room-scale virtual reality, trying to make it easier for students to understand the sense of space in the 3D world through a fully immersive 3D virtual world. A total of 111 students were engaged in 3D drawing in virtual reality, and the ARCS scale is used for investigation. The results were analyzed by factor analysis and reorganized into five facets through exploratory factor analysis. This study shows that virtual reality equipment can enhance interest and motivation in 3D learning, In the process, it is also found that some students who are good at 2D drawing will be confused by 3D drawing.

M190024

On the use of Biomimicry as a Useful Tool for the Visual communication Designer

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Keywords: biomimicry, analogies, designer's toolkit, visual communication design, inspiration

Abstract:

Designers are constantly searching for inspiration to solve their problems. One source of inspiration that has been used for centuries is nature. This practice is often referred to as 'biomimicry'; innovation inspired by nature. This paper reviews existing literature and explores biomimicry information relevant for visual communication design. Perceived benefits and pitfalls of using biomimicry in design are critically discussed. The paper stipulates that when used reductively – with the goal of finding a solution, not to necessarily create an ecologically thing– biomimicry can be seen as a supplement to the visual communication designer's existing toolkit. However, it should not be used bombastically as if only nature can provide the panacea for all design challenges. Based on the review, a new biomimicry tool is presented in the form of a card deck, displaying categorized sources of inspiration towards design solutions. This provides visual communication designers and students with an easy starting point to work with this subject.

M190026

A Learning Scheme for Logical Function which Express with Petri Net Graphs

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Keywords: Learning effective, logical functions, state flow, Petri net graph

Abstract:

The course of logical function is one of basic for each student in engineering field. In this paper, we used the characteristics of Petri net graph to frame the basic logical function symbols as NAND, NOT, and AND. In order to prove our ideal is feasible, we also used the foregoing framed symbols to express the example of half-adder. The constructions of this paper which illustrates a state flow of logical function that can be expressed by graphic model to promote the learning effective for student while learning the course of logical functions.

M190027

Research on Environmental Design Curriculum Plan Based on Profession Ethics in Design

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Keywords: ethics, environmental design curriculum, Analytic network process (ANP), FuzzyQFD

Abstract:

As China's real estate industry develops at a rapid pace, the demand for environmental design professionals has greatly increased, while the problem that how to cultivate their profession ethics in the education phase has gradually become the public focus. However, the current design curriculum syllabus has not yet explored the relationship between professional ethics and the courses by scientific methods, thus resulting in graduates potentially having a cognitive gap on profession ethics. This study first researched the requirements in the industry and by customers. Thereafter, a graph was drawn which is the importance of the code of professional ethics of environmental designers in weight order, through Analytic Network Process (ANP), and subsequently another was gained which is the importance of compulsory courses in weight order in line with environmental designers' profession ethics education by FuzzyQFD. Finally, the paper put forward some subjects which should be emphasized and strengthened in the curriculum of environmental design so as to nurture student's profession ethics, and gave some suggestions for adjustment. It is hoped that the results of this study can be used as a reference for design curriculum planning and professional ethics education.

M190028

**A Study of the Information Technology Integrated Aesthetic Teaching Implemented by
Preschool Teachers in New Taipei City**

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Keywords: information technology, aesthetic, aesthetic teaching, preschool teacher, preschool

Abstract:

The purpose of this study was to understand the current status of the implementation of aesthetic education in information technology by preschool teachers in New Taipei City by exploring the relevance of influencing factors in the application of information technology to aesthetic teaching. A self-developed questionnaire was used as a research tool. The subjects were preschool teachers in New Taipei City, and stratified random sampling was conducted. A total of 235 preschool teachers were selected to participate in the survey. The study results showed that the position of most of the subjects was “teacher,” most of the subjects were over 41 years old, most of the subjects had an education level of “normal system or university educational system,” and the teaching curriculums that most of the subjects used focused on thematic teaching.” With respect to the current status of the integration of information technology into the implementation of aesthetic education, the dimension on which the subjects achieved the highest average score was the “Information Technology Knowledge” dimension. With respect to aesthetic teaching, the dimension on which the subjects achieved the highest average score was the “Aesthetic Cognition” dimension. Generally, the “Overall Intentions of Aesthetic Teaching” were not significantly different between the subjects of different backgrounds, but the relationship between the “Overall Intentions of Aesthetic Teaching” and the current status of the integration of information technology into the implementation of aesthetic education was significant and positive.

M190029

Study on how to cultivate students' design thinking through woodworking classes in K-12 education

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Keywords: design thinking, woodworking classes, K-12 education

Abstract:

Design thinking first came from design concepts, which is solution-focused thinking to solve design issues. These years design thinking has been used widely in business, computer science and even education, especially K-12 education. As one of the most important parts of STEAM(Science, technology, engineering, art and mathematics) education, art refers to art and design, in which design thinking plays an important role to inspire students to seek innovative ways to solve problems of the real world.

Where to cultivate students' design thinking in K-12 education in China? There are several parts of classes from both school education and out-of-school education where the design thinking can intervene.

How to cultivate students' design thinking in K-12 education in China? And how to evaluate the effect of design thinking program? That is the key points. In this paper we will take the woodworking classes as example, to study the process of the design thinking program. Two themes have been used in the program, one is "a home for light" which is not about lamp but light, the other is "a place to show time" which is not about clock but time. From the two themes, students are guided to find an easy or wicked problem, which is the beginning of the program and also the most important part of the program. Centered around the problem, students are eager to acquire the related informational knowledge by themselves or their teams. After a period of conformation and transformation of informational knowledge, the team will have brainstorm to obtain various methods to solve the problem or deal with the projects well, in which the real solution might be hidden. And when the team work continues, "the aha moment"(a sudden comprehension that solves a problem) might come, which is what we want most.

M190030

Research on Harmonized Human-Computer Interaction Design for Preschool Education for Children

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Keywords: Preschool education, Human interaction, Harmonization

Abstract:

How to effectively construct a preschool education method for children with good emotional interaction and human-computer interaction, and to raise children's cognitive ability, behavior habits, and establish a correct outlook on life through human-computer interaction is a matter of rapid development of information technology. problem. Through the analysis of the harmonious human-computer interaction design in children's preschool education tools, this paper proposes a research on human-computer interaction mode for children's preschool education, which will provide a more effective and harmonious human-computer interaction mode for children's preschool education.

M190031

Pictographic Character Illustration for a Creative Education

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Keywords: Illustration, Chinese pictograph, new teaching method, creative thinking, language and aesthetic learning

Abstract:

The purpose of this article is to explain a new teaching method through the insertion of a new class in Chinese primary schools to teach Chinese characters in a creative and more leisurely way. Our support class will use the learning of the pictographic characters from their origin. Chinese culture, and its evolution, is deeply linked to the Chinese writing system; thus, the Chinese characters are a rich store of Chinese culture but, and at the same time, they are one of the most difficult tasks for new learners. With a reforming of the teaching method in a creative way, students will not only memorize the Chinese characters, but also learn their own history, the evolution of the culture, and the customs through creative practice, aesthetics and, in general, the art skills. These combine with illustration and drawing techniques, stressing creative and interesting learning, and a number of skills that too often are not taught in Chinese schools, such as cooperation, interactivity, critical skills and so on. Our purpose is to stress the cultural and artistic field of learning; the teaching method should be balanced between learning new knowledge, not just in mnemonic way, and exercising the creative side of the brain to build a healthy mind, learn how to use their own mental capacity and their own skills, with the added benefit of an improvement in their critical thinking skills. The Chinese teaching system is more open and flexible. Every school decides its own study program independently. Consequently, this situation is particularly favorable for our will. In each school, we can build a suitable study program based on the connection of our class with all the other classes in the school to create a system of cooperation and communication between the teachers. So far, this teaching is based on the teachings of Chinese characters, but we feel it can also be an effective and useful source of inspiration for the teachers of standard classes of Chinese language to avoid a dull and ineffective way of teaching. In the Chinese educational system and, in general, in Chinese ideology, Chinese language classes are the key for the education of Chinese children.

M190032

The application and studies of social hot topics in design class – in the field of environmental design curricula

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Keywords: social hot topics, undergraduate design curriculum, study motivation, environmental design

Abstract:

The undergraduate education in environmental design major plays a vital role in constructing a repertoire of complex students' professional skills- set and knowledge; in order to achieve the enhancement of students' initiative, inclusion of social hot topics into the class teachings is discussed. In subjects of Architectural Spatial Layout and Art of Interior Display, a detailed dissection of social hot topics is conducted in stages of topic selection, research, discussion, design and presentation. The dissertation probes into the tactical strategy on the application of social hot topics and its positive impact on studying motivation

M190033

Discussion On Conceptual Teaching in Design Colleges

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Keywords: Art design teaching, Conceptual, application

Abstract:

Conceptual knowledge and applied skill have always been two contradictory aspects of teaching art design. How to balance the relation between them, is an often new topic in design teaching. Colleges should encourage students to explore and think deeply in conceptual subjects, which will greatly benefit students' development of creativity and comprehensive ability. Based on conceptual teaching, this thesis will try to explain how to combine traditional teaching with conceptual teaching together to provide a reference for classroom teaching and conceptual teaching of art design courses.

M190035

A Study of the Learning Performance of Collaborative Learning and Creative Thinking on the Design Sketches Course

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Keywords: collaborative learning, creative thinking, design sketch

Abstract:

This study aimed to explore the causes and influences in learning effectiveness regarding collaborative learning that includes teaching creative thinking for the design sketches of the “human figures combined project”. Students of the department of fashion design who had applied for collaborative learning with a teacher, and agreed to be an observer in class. There are six weeks in total for this project. After this project, 52 students completed feedback evaluation forms, underwent learning assessment, and had an exhibition. Based on the research purpose, the research findings are summarized below:

1. From the teacher and observer: the learning behaviors of students regarding collaborative learning and creative thinking teaching encouraged students to feel confident, discuss together, award recognition, engage in brainstorming, and complete artworks by themselves were highly and positively developed. 90% of students were improved to different degrees in cognition, affection, and the psychomotor domain.
2. After joining this collaborative learning project with creative thinking teaching combined with the design sketches of human figures, most of the students suggested the cognition, affection, and psychomotor domain were useful.
3. Achievement testing included teacher’s evaluation, peer assessment, and critique.
 - (1) Teacher’s evaluation: Teachers and invited examiners thought that over half of the students’ works contained originality, fineness, perfection, and were highly skilled, which are relevant to collaborative learning and teaching design thinking.
 - (2) Peer assessment: Over two thirds of the students received nine or ten points by peer assessment, which means that collaborative learning is helpful in cognition, affection, and the psychomotor domain.
 - (3) Critique: Most students joined the critique and thought that it was a good opportunity to share their creation concepts and answer questions. They felt a sense of participation and accomplishment during the process.
4. Selecting 20 students’ works to exhibit in the art center on campus encourages students to work hard, and also shows that teachers appreciate students’ works.

M190036

Visual Images Analysis of Tattoo Patterns Applied to Fabric Pattern Design

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Keywords: Tattoo pattern, Pop Art, Fabric patterns, Kansei image

Abstract:

Nowadays, tattoo logo are mostly used to signify as good luck charm to the tattooed individuals, these images are less often used in daily life.

Therefore, our research is made through professional interviews, questionnaire, and previous researches. In designing images, we used tattoo logo as a basic ideas and fabrication. In order to understand the history and progress of tattoo and scarf our research have several topics as follow: 1. description of Kansei image and its combination. 2. Usage of Pop Art. 3. Color selection.

Our research used random sampling by picking between age 18-25 male and female as test subjects, 500 questionnaire were given out, 452 are complete and useful questionnaire. We found out, 10 artistic art works images are elf, dolphin, cat, dragon, cross, lily, skull, butterfly, and leopard. Most people think daily art is colorful, lively for over 61.1%, non color daily art images is still full of young and masculinity for 53.3%. Usage of digital imprints to fabricate 40 tattoo logo daily art scarfs.

This research used tattoo as an baseline design, over polyester scarfs. In creation images to differentiate the traditional negative impression of tattoo, also to show acceptance of this new fashion design. New design and it's usage to our daily life.

M190037

Design Of Narcissistic In MOOC Gamification

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Keywords: Game-based Learning, Narcissism, Educational Innovation, MOOC(Massive Open Online Courses)

Abstract:

Gamification is one of the effective methods that the academic community and the industry believe can improve the effectiveness of MOOC. The game mechanism is applied to the curriculum design of MOOC to enhance user engagement, retention and loyalty. There are many different forms of game mechanics used in MOOC. Narcissism is a personality trait. It is characterized by expansive self-concept, seeking continuous attention and affirmation of others, and encourages various forms of self-improvement behavior in the game. It will cause violent fluctuations in the level of narcissism. The authors found a significant predictive effect of narcissism (self-selection effect) when examining the general usage behaviors in games, different types of games, unusual actions, and specific usage behaviors; various forms of game usage behavior It also strengthens the individual's level of narcissism. This paper mainly explores the manifestation of narcissism in the game, tries to explore the rationalization and improvement of MOOC gamification in behavioral cognition, and discusses the design mechanism.

M190038

Exploration of the Teaching Mode through "Attitude Experience" in the Context of Post-90 Students -- Take the Course of Commercial Display Space Design for an Example

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Keywords: attitude experience, post-90s context, teaching mode

Abstract:

Abstract: At present, post-90 students have their obvious characteristics. About a question, they would display the feature of their independent thinking, their own opinions and their readiness to express themselves. The traditional teaching mode would no longer fit the behaving habits of the generation. Therefore, it is expected that exploration will be made for a new teaching mode to realize more harmonious communication with the generation in the aspect of design thinking. "Attitude experience" teaching attempts to guide the post-90 students' multi-dimensional design analysis and thinking in three aspects, namely, attitudes, feelings and emotion. Then, while meeting the obvious characteristics, this improves the expression of attitude experience on design topics and the effectiveness of the course also explains the necessity and feasibility of the teaching mode exploration based on the context of post-90 students.

M190039

Designing an Efficient Cloud Architecture for Online Lifelong Education

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Keywords: online learning, e-learning, lifelong education, information system

Abstract:

As online learning and e-learning are prevalent and widely used in education, it is important to design an efficient and reliable information system for storing learning data and providing on-demand learning services. In this paper, we design a cloud-based information system architecture for online lifelong education. Since a cloud system is based on the virtualization technology, we propose a virtual resource management scheme, while providing a persistent storage service. With the proposed cloud-based architecture, we can build and operate an e-learning information system for online lifelong education, which requires efficiency, reliability, and persistence.

M190041

Research on the Educational Value of Creativity in Traditional Ceramic Handicraft Practice

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Keywords: Creativity, Value, Ceramic crafts, Practical teaching, Educational innovation

Abstract:

Creativity is one of the indispensable and important abilities of design students today. It inspires students to innovate, innovate, create design thinking and analyze problem-solving skills. In the traditional ceramic handicraft practice teaching activities, the product design majors not only benefit the practical ability and creative thinking expression, but also inspire the individual's ability to analyze, think, communicate and express in the process of practical learning. Exploring the innovative value of traditional crafts in product practice teaching, providing more creative inspiration and manufacturing experience for contemporary design students, and finding and determining the creative value of ceramic handicraft teaching activities is the main purpose of this research. First of all, this study explores the "creative value of ceramic crafts" by literature. Secondly, based on the quasi-experimental research method, this study designed a sample of 50 students from the product design department of Jiageng College of Xiamen University. Answer the "Creativity Value Questionnaire of Traditional Ceramic Handicrafts". Finally, after collecting the "Creativity Value Questionnaire" and removing the incorrect and invalid questionnaires, 45 valid questionnaires were collected. Factor extraction and facet naming were performed using exploratory factor analysis of SPSS 24 version software. The measurement tools used in this study were analyzed by principal component method and maximum variation axis method. Results A total of four factor facets were extracted. The cumulative explanatory variation was 77.086%, the KMO value was .832, the Bartlett spherical test was 730.799, and the significance was significant (with a significance of .000). The total factor analysis of this study factored out four items. Factor facets and naming: (1) creative practice value (2) product innovation value (3) knowledge communication value (4) technical experience value; four major facets 18 item indicators constitute the "traditional ceramic handicraft creativity" Indicator model."

M190042

The Influences of Transformational Leadership and Transactional Leadership on Job Satisfaction of Faculty Members in New Taipei City Cram Schools

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Keywords: cram school, Transformational Leadership, Transactional Leadership, Job Satisfaction, Taiwan

Abstract:

Facing the dropping birth rate in Taiwan, the number of first-grade students is also falling. However, the number of cram school is rising oppositely. There is simply not enough to go around for cram school to survive in the industry. Internally, great leadership method is needed to bring the team to reach a wonderful achievement.

As the result of this research, the employees led under the transformational leadership or transactional leadership have large differences on both inner and outer job satisfaction.

M190043

What influences EFL learners to learn beyond the classroom?

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Keywords: learning behaviors, out-of-class learning, autonomous learners

Abstract:

This study investigated EFL undergraduates' learning behaviors and what influences them to learn beyond the classroom. Data were collected via email interviews with the participants and examination of their learning activities. Content analysis of email interviews, using six categories based on a learner-autonomy model, was used to generate each participant's autonomy scores. Non-parametric Spearman rho testing of those scores and the students' resources-usage scores suggested a very strong positive relationship between students' autonomous-learning behaviors and overall usage of resources as well as the variety of those resources used by individuals. More autonomous learning behaviors were found in students who often used resources to learn at the center. Data analysis also revealed that each participant's autonomous-learning behaviors (based on qualitative examples) fell into more than one of six types: learning beyond the classroom, learning on one's own decision, being autonomous as a communicator, being autonomous as a learner, proactive autonomy and reactive autonomy. Interestingly, low-autonomy students could be found engaging in all six of these behavioral categories. The results also imply that social learning plays an important, but under-acknowledged role in self-access language learning. It is suggested that pedagogical activities linking classroom learning to learning-center resources encouraged students to learn beyond classroom. Future directions for research on autonomy and autonomous-learning behaviors are also discussed.

M190045

**The Application of Merging Mobile Devices into Mathematics Course in Vocational High School
–A Case Study of Calculus**

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Keywords: Mobile Device, Mathematics Education, Calculus, Vocational High School

Abstract:

This research is designed to explore if 2nd grade vocational high school students in Taiwan can get improved after merging mobile devices into the mathematics course. Vocational high school students, when they faced with abstract conceptual courses in mathematics classes - such as calculus, if only explained by texts and graphs on textbooks and teachers' blackboards, are still quite difficult for them. In this study, the topic is about calculus. The APP- GeoGebra of the mobile device can easily manipulate many function graphics and is easy to observe these features. Because of its convenience and portability, the researcher chose mobile phone as the tool because it could be widely used in supporting learning and teaching. According to the questionnaire of the students, observation in class and the interview of the teacher, we found that mobile devices could be a good tool to help students studying and thinking. However, there seemed some restrictions mentioned and the development of using mobile devices in other math or science field might be worth in exploring in the future.

M190046

The Purpose and Struggle of a Community Health Promotion Center in Community Work with Particular Reference to Tainan City

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Keywords: Urban and rural, Community work, Community health promotion

Abstract:

There are 37 regions in Greater Tainan City. The phenomenon described above means that residents in 23 regions of Greater Tainan do not have access to community health awareness programs that are being promoted and delivered by the government. This thesis' objective is to uncover the struggles facing these organizations that are preventing them from staying on in the long run. This thesis' purpose is to provide an overview of Tainan City's community health awareness programs, understand the history, struggles, and challenges of program delivery, and propose a strategy that would help community health awareness programs to remain viable for the long run.

compared to community-based volunteer organizations, hospitals are better equipped to carry out community health awareness programs over the long term. Community-based organizations often face more challenges and difficulties when trying to deliver such programs because community health awareness programs and health issues require the involvement of medical professionals and the participation of area residents. However, district hospitals in Greater Tainan City are mostly in the urban districts of Tainan City. In contrast, there are only 3 district hospitals in rural areas of Tainan City (formerly known as Tainan County). Furthermore, district health stations are usually overloaded with work, forcing them to give up community health awareness projects. Hence, another facet of the problem is that the distribution of resources is not equal between rural Tainan and urban Tainan.

M190047

A Study on Key Factors of Outsourcing Information System of Banking

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Keywords: Information system outsourcing, Key Factor, Analytic hierarchy process

Abstract:

As new technologies including Fintech, artificial intelligence, machine learning and bigdata have arisen and thrived in recent years, the stress level of banks is increasing daily. Facing the shortage of relevant technical professionals brought by new technologies and problems related to execution efficiency and integration ability of IT system development, the key factors of outsourced IT system should be discussed to meet the rising demand of IT. By going through the research and analysis of the literature, the structure of 5 assessment perspectives and 17 key factors is established, and Analytic Hierarchy Process (AHP) is applied as the key factor. The result shows that: first, execution ability and quality is the most crucial assessment perspective of outsourcing IT system; second, the key factors of outsourcing IT system involve product quality, system integration ability, design ability, project execution ability, number of clients and market share. The analysis and conclusion of this study render practical suggestions for financial and banking industry when selecting the most appropriate company to carry out the task of outsourcing IT system in the future.

M190048

Factors Affecting Will of Respect for Life in Korean Nursing Students

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Keywords: Bioethics, Respect for Life, Nursing Students

Abstract:

Background

Nursing students will be nurses who have to help others to make decisions in a variety of ethical conflict situations faced at the medical field. Therefore, acquiring knowledge related to death and bioethics and cultivating bioethical consciousness are important for nursing college students who will live in a sustainable society in the future.

Objective

The objective of this study is to investigate the factors influencing the willingness of nursing college students to respect for life and to use them as basic data to help develop an effective bioethics education program for nursing students.

Method

A cross-sectional descriptive study was used with 442 nursing students. Data were collected with a structured questionnaire and analyzed using descriptive analysis, t-test, ANOVA, Pearson correlation coefficients, and multiple regression with the SPSS/Win 23.0 program.

Results

The result showed that: (1) Religion($t=8.848$, $p<.000$), higher the grade($t=2.843$, $p=.038$), higher school life satisfaction($t=5.275$, $p <.000$) were significantly higher in willingness to respect for life. (2) There were significant positive correlation between meanings of death and will of respect for life($r=.426$, $p<.001$). A significant negative correlation between death anxiety and respect for life wil($r=-.276$, $p<.001$), death concern and will of respect for life($r=-.308$, $p<.001$), (3) Factors affecting will of respect for life were meanings of death, death anxiety, death concern($F=12.06$, $p<.001$) and these three variables explained about 43.6% of will of respect for life.

Conclusion

It is necessary for nursing students to understand the meaning of death and to reduce death anxiety by improving understanding of meanings of death. It also suggests the need to develop an educational program that can improve the will of respect for life by establishing their own views on death and improving the involvement of death in nursing a dying patient and family.

M190049

Factors Influencing Suicidal ideation in Korean University Students

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Keywords: Suicidal Ideation, Depression, Quality of Life, Universities, Students

Abstract:

Background

Korea is the country with the highest suicide rate for 15 consecutive years among OECD countries. Among them, suicide was reported to be the most common cause of death in the 20s. Since 80% of Korean high school graduates enter university and most university students live in their 20s, the suicide rate in their 20s is closely related to the suicide rate of university students. So the suicide of Korean university students is a public health problem that should be of interest.

Objective

The purpose of this study is to investigate the factors affecting the suicide ideation of university students in Korea, and to use them as a basis to establish effective intervention for university suicide prevention through it.

Method

This was a cross-sectional descriptive study using convenience sampling method. The participants were 344 university students at universities. Data were collected with a structured questionnaire and analyzed using descriptive analysis, t-test, ANOVA, Pearson correlation coefficients, and hierarchical regression analysis using with the SPSS/Win 23.0 program.

Results

In the first step of hierarchical regression analysis, satisfaction of school life($\beta=.198$, $p<.001$) was the significant factor influencing the suicidal ideation. Explanatory power was 25.2%. In the second step of the hierarchical regression analysis, absence of parents($\beta=-.095$, $p=.044$), depression($\beta=.247$, $p<.001$), quality of life($\beta=-.280$, $p<.001$), and explanatory power were increased to 42.0%.

Conclusion

The results of this study showed that 20s university students are able to identify high risk group of suicide through sustained depression assessment and that active intervention for depression is necessary. This result confirmed that intervention is needed to improve the quality of life as a way to prevent suicide among 20s. In addition, the results of the absence of parents on the suicidal ideation of Korean university students suggest that the adult university students are still in need of parental support and may play an important role in preventing suicide.

M190050

A Study of Product Form Preference of The Elderly

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Keywords: the elder, Expected Image, form elements, design practices

Abstract:

Population aging is a phenomenon faced by most of the countries around the world. Despite the fact that there is an increasing number of consumers, there is a lack of studies investigating the psychological dimension of elderly consumers for products. this study intends to take the products frequently used by elderly consumers in daily life for example and use the methods, such as questionnaire survey, picture selection, subject interview, and statistical regression analysis, to summarize elderly consumers' expected image and form preference for products, as well as to investigate the differences between the results and designers' ideas.

The research results showed that:1.For elderly consumers' expected image for products, elderly consumers laid particular stress on overall feeling of use of products, instead of a certain characteristic of products. They attached less importance to appearance, but preferred elegant product appearance.2.In terms of the comparison between elderly consumers and non-elderly consumers, they generally shared the same preference. The result also showed that the preference of non-elderly consumers was more consistent with that of elderly ones as their age increases. This result is the same as the general understanding.

3.In terms of the comparison between elderly consumers and designers, all in all, the results of options chosen by designers were also similar to the overall results of elderly consumers.4.In terms of form preference, elderly consumers generally shared with one another the same ideas about the forms of specific images, and such ideas were also similar to those of designers.5.This study used statistical regression analysis to preliminarily summarize the forms and elements of image feelings and processing approaches, as well as draw up a design suggestion table as reference for practical application of designs.

This study preliminarily understood the basic perception of form image interpretation of elderly and designers. On the one hand, this study may help accumulate and pass down design experiences. On the other hand, the results of practical design of products may better meet the needs of elderly .

M190051

Interrogative Design in Experimental Course: A Case Study of Mobile Graffiti Projection Mapping Design

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Keywords: interrogative design, mobile graffiti, projection mapping, experimental teaching

Abstract:

"Interrogative Design in Experimental Course" is a cross-disciplinary curriculum based on the approach of "Interrogative Design" from MIT Media Lab. The course aim of making and presenting "interrogative design works" is to raise questions through art and design, addressing any issues regarding to the campus in order to initiate discussions and draw public attention. This experimental course will be conducted in three phases: First, each group of students will collect and analyze information on the local issues of their concerns and conduct field trips to amend or supplement the information. Second, through "Interrogative Design", the students are challenged to reflect critically of the hidden issues in the daily life and will use them as the content of their work. Third, using the software and technologies acquired in the course, the student will integrate the mobile projection equipment or build a mobile projection vehicle, and then publishing projection mapping works in campus's public place. With the unfolding of this experimental teaching praxis, the participants, questions raised, works produced, and the discussions, presentations, and documentaries that have been made will contribute to the construction of the strategy of interrogative design within Taiwan's socio-historical context. This will be one of the significances and contributions of this research.

M190052

On the Construction of Classroom Evaluation Mode in General Chinese Universities

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Keywords: General Chinese Universities, Construction of Classroom Evaluation Mode, Analytic Hierarchy Process

Abstract:

Classroom teaching is one fundamental work which is the most basic in general universities. With the advent of the artificial intelligent (AI) era, the education turns to searching knowledge-acquiring methods from purely delivering knowledge and the duty of teachers lies in providing more encouragements and thinking, rather than imparting knowledge. Therefore, the evaluation mode of classroom teaching is inevitably changing in a corresponding manner, which acts, at the same time, as the research focus of experts and scholars.

This paper hopes to construct a complete classroom evaluation mode which is applicable to general universities. On the basis of the Analytic Hierarchy Process (AHP), this mode is adopted in two phases. In the first phase, the literature review method is adopted to analyze and summarize both evaluation modes adopted in general universities in China and recent research theses written by experts and scholars in order to figure out the direct and indirect relatedness. In the second phase, AHP is adopted to determine the weight between criterion and dimensions in order to construct a complete classroom evaluation mode. This paper hopes to provide one complete classroom evaluation mode for general universities and to master a deeper understanding of the status quo of classroom teaching, thus a more scientific and effective classroom evaluation mode being explored in the future.

M190053

The relationship between passion and subjective well-being in sport volunteers: The mediating role of Rumination

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Keywords: harmonic enthusiasm, forced enthusiasm, multi-level ruminant thinking, sports volunteers, subjective well-being

Abstract:

Volunteering has long been recognized as a rewarding and beneficial activity for individuals (Chambre, 1987). With the increase of the demand of sports volunteers, it is worth while to ponder whether sports volunteers can gain growth, direct emotion, improve life satisfaction and continue volunteering work from the events they serve.

When the individual experience to the value of the thing is not up to the desired goal, its focus will be locked in the idea related to the goal, and constantly in the mind of the phenomenon of repeated thinking, that is called ruminant thinking. And the ruminant thought often increases the negative mood and reduces the problem solves the effect. Carpentier et al. (2012) also used to think of ruminant as intermediary variable, respectively, to explore the two-dimensional enthusiasm model and happiness.

We believe that the concept of passion should enable us to understand the process of subjective well-being in a better way. The purpose of this study is to solve these problems. In addition, although Carpentier et al. (2012) has proved the mediating effect of the ruminant thought on the enthusiasm and happiness, but the research on the ruminant thinking is only measured by a single facet and considered to be negative emotional factors. Based on this, this study is based on the Research foundation of Carpentier et al. (2012), and re-examines the mediating effect between enthusiasm and subjective well-being in the perspective of multi-degree ruminant thinking.

M190054

Personalized roll call service based on beacon indoor positioning technology for intelligent campus

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Keywords: Beacon indoor positioning technology, Intelligent campus, Personalized information service

Abstract:

This paper proposes a roll call service based on beacon technology for class, which can instead of the traditional hard copy to save time and effort for teachers and learners. According to the personal curriculum, the proposed roll call service applies push technology to remind the user that the class information includes the class time and the classroom location in campus. By using beacon indoor positioning technology, the proposed roll call service can validate the position of the user. The execution of the proposed roll call service is background process supporting android operating system for mobile devices. After the user login the proposed roll call service and enters into the classroom, the proposed service verifies the identification and class time for the user to automatically executing roll call. That is, the user doesn't need to click on the function of the proposed roll call service while the class is progressing. In the extended application, the proposed service can be used for reception in a conference or a daily senile center to validate the participants.

M190055

When Media Archaeology Meets Maker Practice: The Trans-disciplinary Design of Flower of Time - Universal Correspondence

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Keywords: Media Archaeology, Trans-disciplinary Design, Maker Practice, New Media Arts, Technological Arts

Abstract:

The core value of this research is the potential for trans-disciplinary knowledge. In this research, the methods of media archaeology integrated with the methods of Maker practice. The outcome is then applied to an art exhibition's concept development and design.

Media archaeology is to understand the emerging technology by excavating the history of specific media. Media archaeology discusses how the new media recalls, circulates the media narratives, materials and techniques that seem to have been forgotten, neglected or concealed. This research continues the recent pursuit of practical methods in Western media archaeology, and by combining with the spirit of Maker practice, explores the techniques and dreams of mechanical clocks in the 16th -18th Century. It then realizes these dreams in an art exhibition by utilizing digital technologies.

This research will describe the work "Flower of Time- Universal Correspondence" which integrates the techniques of digital fabrication, programming and electronic mechanical engineering, and discuss how digital technology could transform the experience and aesthetics of a mechanical clock. By discussing the audience feedback, it will also explore the implications of this practice for emerging art and design education.

M190056

A Study on the Trend of the Test Project of Joinery Trade in the Regional Skills Competition, Taiwan National Skills Competition by Derivative Calculation Formula

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Keywords: Regional Skills Competition, Taiwan National Skills Competition, Joinery, Derivative Calculation Formula

Abstract:

The purpose of this research was to study the trend of the Test Project of Joinery Trade in the Regional Skills Competition, Taiwan National Skills Competition (hereinafter refer to as Regional Competition). The Test Projects of Joinery Trade from the 42th to 48th Regional Competition were the objects of the research, with the Test Project from 42 th to 47th Regional Competition as analyzed objects and the Test Project of 48th Regional Competition as the predicted object. By studying the species of materials, form of joint and method of joint adopted in the Test Project, it was hoped to draw a conclusion that could be a reference for the training of competitors, so as to improve the quality and capacity of competitors.

The result of the research showed that the predicted materials used in the 48th Regional Competition was Yellow Poplar Tuliptree (broad-leaved forest) and that the predicted most common joint form was Cope-and-Stick Joint. As for the method of joint, the result of the research suggested to focus on the training of various Bridle Joint. Furthermore, the assumption method derived from the Derivative Calculation Formula ($\sum_{i=42-47}^n [\rho_{48th}]$), concluded by the research, was adopted to obtain feedback and make amendment in order to enhance the skills level of the competitor. At last, the joint form and method mentioned above indeed showed in the Test Project of the 48th Regional Competition. Hence, it could be seen that the prediction made by the research was consistent with the Test Project of the 48th Regional Competition. Moreover, the Derivative Calculation Formula also derived the trend of Test Project of Joinery Trade in the Regional Competition. Based on the result of the research and the actual Test Project,

In conclusion, the overall predicted result was in line with the approach of Test Project, which could be the formula to predict joint form and method used in future Test Project. It was expected to improve the benefit and efficiency of vocational education by the systematic integration of this kind, so as to become the guidance of competitor training in vocational schools.

M190057

Research on Informal Learning Characteristics of ACG Doujin Community in the Age of We-media

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Keywords: Informal Learning, Doujin Community, self-learning environment

Abstract:

ACG is short for Animation Comic Game and it's doujin culture refers to creation activities and corresponding products based on original works. With the development of We-media, doujin culture has become increasingly prosperous. Doujin fans gather together on we-media platform to share creation experience and works. As one of the popular internet culture types, doujin culture has been favored by researchers in communication sciences. However, little attention has been paid to the research of informal learning generated in ACG doujin community communication. This paper focuses on the research of informal learning originated in doujin community social communications and analyzes morphological characteristics of individually initiative and informal connected learning generated in ACG culture environment that youngsters participated in and out of classrooms. Through this, certain beneficial ideas might be given to education researchers about how to construct self-learning environment, lead learners to originate self-learning delight and activate inner motivation of learning.

M190058

Research on the profession ethics of designers from different backgrounds

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Keywords: ethics, designers, One-way ANOVA, Pearson Correlation Analysis, Regression Analysis

Abstract:

With the rapid development of design industry in recent years, much attention has been paid to the professional ethics in the industry. This research aims to explore the recognition of designers from different backgrounds towards professional ethics and try to classify the characteristics of it. In this study, Descriptive Statistics, One-way ANOVA, Pearson Correlation Analysis, Regression Analysis and Cluster Analysis were used to discuss the results of the questionnaire. Finally, the results showed that differences between academic qualifications and professional categories may affect designer's professional ethics recognition. Meanwhile, this study, based on the research results, divides the cognition of profession ethics into four categories, each of which has its own unique characteristics.

It is hoped that the results of this study can effectively promote the cultivation of designers' profession ethics, and improve the establishment of relevant profession ethics courses in design education.

M190059

Effect of Sports Activity on Sustainable Social environment and Juvenile Aggression

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Keywords: Sports Activity, Sustainable Social Environment, Juvenile Aggression, P.E Class

Abstract:

Sports, as a social institution is one of the most important extracurricular activities for an adolescent. At this point, it is believed that sports keep adolescents out of problems by teaching the rules and disciplines. But the effect of sport on adolescent is still controversial at the level of theoretical and empirical perspective in sociology and psychology. For this purpose, this study focused on sports activity and aggression with variables from sustainable social environment factors on teacher and friend relationship based on the empirical study. This research used the Korean Children & Youth Panel Survey (KCYPs) which conducted the subjects of 2,378 adolescents by multi-stage stratified cluster sampling from 98 schools all over the country on March 2017 in South Korea. The data was analyzed by reliability analysis, correlation analysis, exploratory factor analysis, and path analysis, with SPSS Ver. 23.0 Windows Program.

The results were as follows: Firstly, sports activity had a statistically significant effect on the sustainable social environment (teacher and friend relationship). Secondly, it was found that sustainable social environment was a statistically significant effect on aggression (toward others and ego). Lastly, sports activity showed not a direct effect on aggression. However, sports activity has affected on aggression only through the sustainable social environment. In conclusion, sports activity decreased the aggression under these conditions of positive relationships with teacher and friend.

M190060

A Study on Course Content Requirements and Design Strategy of Tea Ceremony E-Learning

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Keywords: Kano Model, E-Learning, Tea ceremony, Design strategy

Abstract:

Tea ceremony is important part of tea culture and is the main way to spread tea culture. The traditional tea ceremony learning method is face-to-face learning. With the development of science and technology, E-Learning is become more and more popular. Learning tea ceremony tough online video is a common phenomenon. But E-Learning and face-to-face learning are different. How to develop effective tea ceremony E-Learning method and suitable teaching content to meet the needs of users is important. Therefore, this study Summarize the course content requirements of the tea ceremony E-Learning though investigation method and expert interview. Applying Kano Model to extract out four kinds of attribute requirements, include one-dimensional attribute, must-be attribute, attractive attribute and indifferent attribute. Propose the design strategy of course content of the tea ceremony E-Learning though Focus Group Method. It hopes to provide reference for relevant people and promote the process of tea science E-Learning.

M190061

Effects of Cognitive Style on Interactive Behavioral Patterns and Learning Performance within a Game Based Learning

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Keywords: cognitive style, digital educational game, escape learning, learning behavior pattern, human computer interaction

Abstract:

Cognitive style is an important factor which affects learning performance because it affects the problem solving and the application of strategy, especially in game-based learning (GBL). GBL not only presents entertaining, but also provides a flexible interactive mechanics. Learners can adopt their own strategies to interact with digital educational games, but more importantly, these interactive behaviors are cognitive representations which impact the different interactive behavioral patterns due to cognitive style. To investigate the effects of cognitive style on students' interactive behavioral patterns and learning performance, a game system which is related to the environmental education was designed to reach the research purposes. This system comprises four modules including: (1)Embedded external game module. This module provides functions for embedding external games which are selected from online games or self-made games; (2)Learning content module: learning contents are provided by video clips; (3) Hint module: This module provides functions for completing external games smoothly. (4)Assessment module: This module provides functions for an assessment mechanism which is designed as Drag-and-Drop game. (5)Behavior recoding module: This module provides functions for extracting game logs to store the game log database. Above these module creates a well-GBL system. Through experiment design, behavioral data are based on game logs which are garnered from elementary five-grade students to model meaningful interactive behavioral patterns. The results indicated that cognitive style had a great impact on interactive behavioral patterns and learning performance. Interactive behavioral patterns showed that field dependent learners needed more hints to complete the game tasks than the field independent learners, and many frequencies in try-and-errors, but the condition is contrary to field independent learners. Most learners seemed to tend to escape learning and prefer making the rodman answers to complete the practices, especially for learners with lower learning performance and the majority of field dependent.

M190062

Differences of Personnel Training Requirements about Tea Science (Creative Design) among Teacher, Student and Enterprise

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Keywords: Interdisciplinary, Tea culture, Creative design, Personnel training

Abstract:

Tea culture is an important part of Chinese traditional culture. With the rise of creative industries, tea culture and creative design begin to develop synergistically. In 2014, Anxi College of Tea Science of Fujian Agriculture and Forestry University set up a new major which is Tea Science (Creative Design). The major aims at enhance the competitiveness of the tea industry and tea students to meet the changing needs of society though integrating creative design into tea science. But a new major has inevitable contradictions of capacity requirement among teacher, student and enterprise. Therefore, this study trying to explore the differences of personnel training needs about Tea Science (Creative Design) among teacher, student and enterprise. Fest of all, this study summarize the target capacity requirement of tea science (creative design direction) tough Focus Group which is composed of relevant experts. Then, applying one-way ANOVA explore whether there has a significant difference in target capacity requirement among teacher, student and enterprise. It hopes to advance the development of the major.

M190063

Losing on Competition against Oneself -From Philosophical Perspective of An informal fair play-

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Keywords: An informal fair play, A formal fair play, Competition against oneself

Abstract:

The purpose of this study is to identify what it means not to do informal fair play based on the viewpoint of the competition against oneself, and why the victory without doing fair play is defeat.

In the first chapter, according to the concept of fair play by the Sports Declaration by the International council of Sports and Physical Education (ICSPE) and Lenk who is sport philosopher, a formal fair play means that keeping the institutionalized sports rules, while an informal fair play can be understood as respecting the player oneself and the counterpart.(ICSPE, 1964), (Lenk, 1978). It is considered that not to do a formal fair play is a defeat. However, this study believes that to address that the victory not keeping an informal fair play is a defeat has some limitations. With regard to these limitations, in the second chapter, it is considered we think that the behavior of the player that determines if it is fair play or not is an intentional behavior which integrates desire, plan and motivation inside of the player rather than unconscious behavior by review of the relationship between fair play and competition against oneself.

In the final chapter, the meaning of the informal fair play, to respect the player oneself and his/her counterparts, is reviewed through the example of Pierre de Coubertin Medal and other sports. Finally, this study shows why the victory without keeping the informal fair play is not a victory but a defeat from the perspective of competition against oneself based on the two meanings. To respect the counterpart means to recognize the counterpart as the competition as the mutual quest for excellence. It explains that to give up rather than try his/her best is not to respect oneself through the example of Rima and Abebe. Based on this meaning, it addresses that the reason why the victory without an informal fair play is a defeat is that the subject who gets victory without an informal fair play will find himself/herself yearning for the victory keeping an informal fair play and will make self-negation.

M190064

The influence of user' behavioral intention on gamification augmented reality in STEM education: Integrating the technology acceptance model (TAM) and media richness theory

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Keywords: Gamification Augmented Reality, Technology Acceptance Model, Theory of Planned Behavior, Media Richness Theory, STEM Education

Abstract:

STEM (Science, Technology, Engineering and Mathematics) education faces an interesting conundrum. Western countries have implemented constructivist inspired student centred practices which are argued to be more engaging and relevant to student learning than the traditional, didactic approaches. However, student interest in pursuing careers in STEM have fallen or stagnated. In contrast, students in many developing countries in which teaching is still somewhat didactic and teacher centred are more disposed to STEM related careers than their western counterparts. This paper uses structural equation modelling (SEM) to examine the influence of user' behavioral intention on gamification augmented reality in STEM education. This study aims to develop a gamification augmented reality learning material as well as the strict and empirically meaningful Apps (Applications) using intention. There are four specific characteristics (Media Interactive, Entertainment, Attitude, Practicability, Behavioral Intention) are examined to get a more in-depth and nuanced insight into the factors user's behavioral intention. For each STEM characteristic, teachers' attitudes are positively linked with instructional practices. Moreover, different aspects of school context influence instructional practices either directly or indirectly. The results show that the best predictor of practicability, entertainment, and media interactivity for intention towards GAR-STEM (gamification augmented reality STEM education) design is usage attitude ($R^2 = 0.547$), followed by intend to use ($R^2 = 0.528$), practicability ($R^2 = 0.408$), and entertainment ($R^2 = 0.186$). This study proposes a general extended technology acceptance model for intention toward GAR-STEM design. Our proposed model explained 52.8% variance in behavioral intention. Overall findings suggest that usage attitude and intend to use may augment its function as a key factor for procedural intention toward GAR-STEM design. Opportunities for ameliorating the implementation of integrated STEM are discussed.

M190065

Research on creative team's personality and creative effectiveness

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Keywords: Creative team, Personality, Creative Effectiveness

Abstract:

With the rapid development of globalization, enterprises need to use innovation to create value for sustainable development, but good creative results depend on the joint efforts of the team, it is possible to understand the personality traits of each team member, and effectively plan the composition of team members, believe it can help to the output of creative results.

Therefore, this study first invited 36 design department, college students, with every 4 people a group of creative thinkers. Secondly, this study through a questionnaire to survey students' individual learning style, personality traits and teamwork ability, and in the publication of the creative results, this study invited 5 design experts to score the creative achievements of each team. Finally, this data is analyzed by using statistical methods to understand the relationship between creative team's personality and creative effectiveness, and the results of this research are expected to be a reference to the composition of the creative team in the future.

M190066

A Sustainability Innovation Experiential Learning Model for 3D VR Chemistry Laboratory: An Empirical Study with PLS-SEM and IPMA

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Keywords: sustainability, virtual reality, experiential learning, learning motivation, cognitive load

Abstract:

Sustainability literacy has become an indispensable quality of citizens in present and future society. Crucial issues when dealing with indicators for sustainable development are balance, trade-off and integration among sustainable environment, sustainable society and sustainable economy. The assistant tool and strategies of learning should be considered to support promoting the sustainability literacy. An e-learning through gamification could be an approach to promote the sustainability literacy. The use of 3D virtual world is becoming ever more widespread. The environment provides a deeper level of interaction in the field of education. Learners may be confused by the 3D application features, and multiple views may interrupt learning at the same time. Since it is difficult for students to understand the concepts of chemistry, they need to learn them through experiments; however, real experiments entail a high cost. This research investigates the virtual chemistry laboratory's affecting academic achievement. The experiment subjects are the second grade junior high students who study chemistry. Two classes were chosen randomly. This research expected that it would take eight weeks for all the learning activities and to design four phases. Then, the questionnaire would be completed by the students who had used the virtual lab before and would use SEM (Structural equation modeling) for the analysis. Importance-performance matrix analysis (IPMA) could help expand the basic PLS-SEM result with the fraction. The research expects that students who use the virtual lab will have higher grades than before. Experiential learning significantly affects learning motivation and academic achievement. The cognitive load and self-efficacy significantly affect learning motivation. Involvement significantly affects academic achievement. The virtual chemistry laboratory significantly affects academic achievement. Students who used the virtual lab obtained a better understanding of the chemical concepts. Moreover, a virtual lab promotes students' motivation in regard to chemistry.

M190067

A Study of Sketch Strategy in Product Design Process: Differences Between Designers and Students

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Keywords: Protocol analysis, Sketch strategy, Product design

Abstract:

The design process is regarded as a problem-solving process, and the choice of strategies will greatly affect the efficiency of problem-solving. In recent years, the research on design strategy has been paid more and more attention by designers and educators. Most of the previous studies are descriptive analysis. Protocol Analysis was used to analyze the protocol of expert and novice designers in sketch process. It is clear from the results that expert designers tend to use breadth-first design search strategies, while novice designers tend to use depth-first design search strategies.

M190068

A Study of Sketch Strategy in Product Design Process with Different educational background

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Keywords: Product Design, Protocol analysis, Design Strategy

Abstract:

The design process is regarded as a problem-solving process, and the choice of strategies will greatly affect the efficiency of problem-solving. Designers with different backgrounds have certain differences. Especially, students studying product design in China are divided into two categories in high school, one is art students and the other is non-art students, the difference is whether there is a basis for art learning. Protocol Analysis was used to analyze the differences. It is clear from the results that art students tend to use bottom-up design search strategies while non-art students tend to use top-down design search strategies.

M190069

Innovative Form Generation Training for Bridging Product Design Practice

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Keywords: Form Generation, Industrial Design, Modular Courses

Abstract:

In the field of design practice and education, the concept of "form follows function" is deeply rooted in the basic education. In the pursuit of diverse creative solutions, it is better for students in the department of design to have a good command of product form. However, the rational analysis of product function is the necessary condition. It is more important to improve the sensitive ability (sufficient condition) of integrating form generation, as well as to increase the flexibility of the problem-solving process for avoiding the dull design expression. Considering about these factors, this teaching practice research wants to develop, practice and test innovative modular courses of form generation. In "Form Theory" course, we conducted 4 modular projects to enhance student's skill of form generation in product design. For developing a more complete training, 4 projects (including rectilinear volume, Gestalt form of 3 functions, simplified speed form, and curvilinear volume based on rectilinear volume) were respectively corresponding to different level of form generation (including proportion, contour, volume, surface, and detail) and product design thinking about decreasing and increasing product function. In the summer of 2018, 25 students took this course. After each project, student self-assessment of learning performance and learning response was conducted to explore the relevance of the 4 projects. The initial analysis shown that students performed a little poorly in the second project "Gestalt form of 3 functions" compared to other projects. The poor performance of students may relate to the combination of functions (e.g., mechanical pencil, screwdriver, and utility knife). However, all 4 modular projects were able to effectively cultivate our student's potential for better form expression. We hope that our finding is conducive to follow-up improvement of course and syllabus design.

M190070

**A STUDY ON THE INFLUENCE OF TRADITIONAL CULTURAL EDUCATION ON LIVING
SPACE OF SWATI ARCHITECTURE**

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Keywords: Swati architecture, colonial, traditional culture, education, house

Abstract:

In the research, the form and type of Swati houses have been studied from the period of pre-colonial to post-colonial. Through examining and analyzing how the qualities and elements have been retained and infused in modern Swati architecture.

The method of literature review, semi-structured interview, voice recording, image recording and mapping, and induction have been used to understand the influence of Swati modern houses from traditional ones.

M190071

Revitalization of Korean New Religions in the 1970s

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Keywords: Korean new religions, Secularization, Post-secularization, 1970s, Neo-Confucianism

Abstract:

The concept of secularism underpinning modern Western society insists on weakening the influence of religion by viewing the world through the lens of science and reason rather than through religious beliefs, traditions, and political authority. However, Korea has adopted a different perspective on this matter. A number of Korean new religions were in decline and they seemed to be facing imminent death during the Japanese colonial period (1910-1945), the Korean War (1950-1953), the Lee Seung-man government (1948-1960), and the Park Chung-hee government (1961-1979), which were periods of peak political suppression and control. The Japanese colonial government oppressed Korean new religions which had taken root in the ethnic movement. The Rhee administration, in order to retain power, implemented various acts favoring Christianity, to the detriment of new religions, which consequently were unable to gain a foothold in society. The Park Chung-hee government, focusing on industrialization and urbanization, viewed new religions as pseudo-religions, considering them to be an obstacle to modernization. However, the 1970s saw a dramatic shift in religious circles, when new religions founded in the 19th century but oppressed until then revitalized and spread rapidly. Why could Korea in the 1970s not adopt the smooth relationship between religion and modernity prevalent in the West? Instead, why did new religions based on tradition develop and flourish? This study aims to answer these questions by comparing the theories on secularization and post-secularization of the West with the philosophy of Confucianism of the late Joseon Era. The study aims to reveal the foundation of Korean new religions from a theoretical perspective. Furthermore, this empirical research will, from a socio-political point of view, clarify why industrialization of Korea in the 1970s increased dependency on religions and revitalized new religions, rather than diminish their influence.

M190072

Study on Effective Strategies of "Mutual Identification" between Teaching and Learning in Online Courses --Taking Art Design Courses as an Example

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Keywords: online courses, cycle and growth, benefits from learning, instant results

Abstract:

The number of online courses is increasing, and the number of online learners is increasing. The development of courses has gradually changed from quantity expansion to quality improvement. However, the model of the course mainly based on the teacher's knowledge points explanation and the exercise of questions without enough attraction and coupled with the lack of self-discipline of the students results in the low rate of maintenance of the online course students. The effectiveness of teaching is the premise to ensure the sustainable development of online courses, which needs mutual identification between teaching and learning. It forms a virtuous cycle and growth in the acquisition, mastery, interaction, application and feedback of knowledge. This study regards the art design class learners as the center, through the analysis and research of the domestic and foreign popular video sharing platform, entertainment and other common mode and their popularity. By undertaking sampling observation, interview and questionnaire survey, on the basis of cognition, emotion, and behavior in the process of online learning, it is to find the perfect point of teaching mode to improve, adopt diversified teaching methods and form multiple interactions of learning process so as to change students' learning environment of loneliness. With respect to the recognition of teaching achievements, we provide customer resources through many co-operations on the platform, and accumulate benefits from learning in the way of receiving orders to obtain instant results and gain the motivation of learning. It aims at making teaching and learning truly as the purpose of talent training and providing a new model reference for the development of online learning in China.

M190073

The Influence of Animation on the Social Development of Preschool Children

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Keywords: animation education, preschool children, social development

Abstract:

With its popularity as well as the exaggerated art form, animation has become an indispensable part in the growth process of preschool children. Preschool children are at a critical stage of social development. Therefore, animation plays a crucial role in their social attributes such as children's cognition, behavior, interpersonal relationships and ethics etc. This paper will from the perspective of animation education analyze the reasons why animation has a negative impact on preschool children and then put forward suggestions and countermeasures to optimize the educational influence of cartoons on the social development of preschool children.

M190074

An Assessment of Attitude, Knowledge, and Application of STEM on Science Teachers: An Effort to Foster Educational Sustainability

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Keywords: Assessment, Knowledge, Attitude, and Application of STEM, Science Teachers, Educational Sustainability

Abstract:

Assessment is necessary in every educational activity, including the application of STEM Education. However, there are very limited reports on the progress and development of STEM education inside individual Asian countries, including, Indonesia. This study aims to provide basic information about the progress of the latest developments of STEM Education in Indonesia, which includes attitudes, knowledge and applications, the relationship between these three variables, as well as its contribution to educational sustainability. This type of research is a mix both of qualitative and quantitative research methodology. The results show that more than 75% of respondents have very good attitudes towards STEM education. However, over 65% of respondents are below average in terms of knowledge about STEM Education. On average 50% of respondents previously implemented STEM education in a natural classroom setting learning. Other components are discussed in detail, such as comparisons and correlations between STEM Education knowledge, attitudes, and applications, as well as the teacher's perception of STEM education. Providing challenges and opportunities for improving the quality of education in the future are discoursed. The results of this study suggest that knowledge, and attitudes are fundamental to the proper implementation of STEM Education as well as to promote future educational sustainability.

M190075

A Relationship between Teaching Self-efficiency and Cultivating Ability of Core Competency for Clinical Nursing Preceptors

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Keywords: Clinical nursing preceptor, Teaching self-efficiency, Cultivating ability of core competency

Abstract:

Introduction:

Core competency is important for nurse professional training. Learning of nursing clinical practicum should be focused on core competency to learn clinical skills. The teaching self-efficiency of clinical nursing preceptors plays a key element of student learning effects. The purpose of this study aims at investigating and exploring the relationship between teaching self-efficiency and cultivating ability of core competency for clinical nursing preceptors.

Methods:

A cross-sectional survey was conducted for nursing preceptors employed by nursing universities and colleges in 2016. A self-compiled structured questionnaire was developed after literatures' review and data were collected accordingly by hard copies and on-line questionnaires respectively. A total of 206 questionnaires returned effectively.

Results and Suggestions:

Results showed that the mean score of teaching self-efficiency of clinical nursing preceptors is 4.40, and the mean score of cultivating ability for core competency is 4.43. The teaching experience of 6-10 years, teaching experience over 10 years compared to the teaching experience within 3 year, and 10-14 year nursing clinical work experience compared to 1-5 year nursing clinical work experience are three significantly predictive impact factors of clinical teaching self-efficiency and cultivating ability of core competency. Teaching preparation, teaching evaluation utilization, professional skill utilization and communication capability of clinic nursing teachers are the three significantly predictive impact factors of cultivating ability of core competency. Results of this study can provide references for nursing preceptors to do teaching preparation and clinical nursing education reform.

M190079

Emotional Interaction Design in Augmented Reality Technology Learning Environment

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Keywords: Augmented Reality Technology, Emotional Interaction Design, Learning Environment

Abstract:

The process of learning is the process of knowledge acquisition and emotional experience, and the unity of cognition and emotion. The interactive technology based on augmented reality provides educators with a new way of expressing to learners, and build a space for independent exploration for learners in the most natural way. At present, the educational application of augmented reality ignores the important role of affective factors in the cognitive development of learners, and the problem of lack of emotions is gradually highlighted.

In order to enable learners to achieve a comprehensive and unified development of cognition and emotion in the augmented reality learning environment, the concept of "emotional interaction" was introduced into the augmented reality learning environment, and the relationship between cognitive interaction system and emotional interaction as well as the law of interaction in the augmented reality learning environment were explored from the perspective of "learner-centered". Based on the research results, the elements of emotional interaction design were summarized , which could be used for in-depth understanding of the essence of augmented reality learning environment and for enriching and developing the theory of teaching interaction.

M190080

Study on the Development of Chinese Traditional Bamboo Furniture in Taiwan

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Keywords: Bamboo furniture, Traditional Culture, Environmental protection, Inherited.

Abstract:

As the effects of global warming have become worse, various countries and industries are actively focused on environmental protection. As a result, bamboo become increasingly popular material in furniture design. In fact, bamboo has been used as a primary material of furniture manufactures in China since ancient times. However, the style of bamboo furniture, especially bamboo armchair, has been rarely studied. To achieve these goals, literature reviews, expert interviews, and personal participation in making bamboo artworks are performed. Therefore, this study discusses the history of traditional Chinese bamboo furniture with the compilation of historical documents. Then, it is decided to understand its development trend and finally discusses the four factors affecting the influence of bamboo furniture manufacturing process through expert interviews. The study applied those factors on actually participating in the implementation and teaching. The results of the questionnaire analysis in several bamboo craft exhibitions are presented.

Our study outcome shows that (a) traditional bamboo furniture presents the characteristics of Chinese culture and the spirit of pioneering Taiwan. (b) The four basic elements of the application of structure, skills, materials and connotations can show the craftsmanship of bamboo furniture. (c) Using diverse knowledge, technology and innovation to improve the connotation, efficiency and accuracy of handcrafting, and to express more interesting ideas in artworks. The study also offers recommendations for researchers interested in the bamboo crafts in the future. The contribution is to provide a new design concept on bamboo crafts for brilliant directions.

M190081

Curriculum Design for Students in Mathematics: Data Science Courses as Examples

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Keywords: Curriculum Design, Mathematics, Data Science

Abstract:

Recently, many universities begin to propose several innovations and refinements in education, including teaching improvement, integrated curriculum, multidisciplinary programs, and capstone courses, to better incubate students for the future.

From the perspective of mathematics education, several studies analyzed the traditional mathematics curricula, investigated issues in current practice, and proposed improvements in mathematics education. For instance, Coffland and Xie pointed out that there existed three major issues about traditional mathematics curricula, including (1) the gap between course materials and students' real-life mathematical experiences; (2) the scattering of knowledge in different courses; and (3) the lack of mathematics applications to other subjects.

Based on the aforementioned challenges, a series of course reviews was performed in the department of applied mathematics in one university to get more insight into the major issues and the curriculum improvements possibilities. For instance, students enrolled in statistics course usually learned the theoretical knowledge and did related practices in textbooks by topics. However, the scenarios described in textbooks or course materials are often limited in a certain scope or designed in the simpler form. A critical gap exists between theoretical knowledge and practical problem-solving in the real world. In addition, students have no experience in the leverage of knowledge and skills from mathematics, statistics, and computer science, which are essential for research and industry nowadays.

Thus, the curricula of certain courses in the department of applied mathematics are refined and implemented. Major courses selected and discussed in this paper are "Data Processing and Analysis" and "Statistical Software for Data Analysis." The education goals, syllabuses, and the corresponding course designs are introduced. Furthermore, major findings and lessons learned are discussed for more insight into the deployment and refinement of the curriculum in the future.

M190082

The Study for Aesthetics of Taiwan's Bamboo Craft Style

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Keywords: bamboo craft characteristics, aesthetic feeling, bamboo craft, bamboo furniture

Abstract:

Bamboo plays an important role among various materials for Chinese furniture. It is usually related to daily life which has been the subject of literati and poetry since ancient times. Nowadays, it derives from nature and grows fast which has become one of the favorites environmentally friendly materials. The crafts of Bamboo are relatively rare in research and development compared to wood crafts, especially the aesthetic style of bamboo furniture needs to be done in the further study. This paper first discusses the development process of bamboo craft. It is decided to derive the importance of the beauty of bamboo craft style and then discusses the formation of its style. This study shows that: (1) Bamboo craft style pays attention to the expression of "form" with richness in various "meanings" that cause beauty. (2) Four factors are analyzed that affect the aesthetics of bamboo crafts: structure, skills, materials, and connotations. (3) The solution to understanding the aesthetics of style to promote the formation of listening style strengthen the aesthetic significance of the work and guide the development of bamboo crafts. This study illustrates the importance of the beauty of bamboo craftsmanship through literature and case content analysis, questionnaire surveys, expert interviews and actual participation in creation. It incorporates more emotional elements into the design of bamboo crafts in promoting the development of bamboo crafts.

M190083

Aspects and culture-historical values of play seen in the Buddhist ritual - Centered on the Goryeo society

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Keywords: Goryeo society, Buddhist ritual, play, religious value

Abstract:

Religion is the most complex phenomenon among human cultures. Moreover, the phenomenon that best reflects the complexity of a religion is ritual. Rituals have a repetitive characteristic. The group that conducts the ritual shares a standardized ideological system of the creed embedded in the ritual practice. Religious ritual enables conductors to experience intuitive values including truths of God and the universe. Also, it provides an opportunity to shift knowledge into wisdom. It is a practice where the God and humans meet and enjoy together.

Humans seek for the value of life in labor and play. Turning into the modern society, people tend to treat play as something inferior than labor, yet, those people that regard play as meaningless still spend time playing in their lives. It is because biologically a human can survive in a good condition when he or she balances 'rest' and 'labor' adequately; the philosophical value play has was put front as a very important element. If so, how did Goryeo people in the medieval times play? Plus, what kind of relationship did it have with religious ritual? To come up with an answer to these questions, it is necessary to identify the aspects of play that was carried out as a significant ritual of Buddhism during the Goryeo Dynasty where Buddhism bloomed, and examine the value of play during the era. This work contributes to enhancing liberal knowledge of the modern people by understanding the way of life and taking it as a means to reflect upon ourselves. This study considers aspects and values of play reflected in Buddhist rituals called Yeundeung-hwae and Palgwan-hwae centered on the Goryeo Dynasty in the historic flow of Korea from a culture-historical perspective. To accomplish the objective of the study, practice of plays that took place in Yeundeung-hwae and Palgwan-hwae was studied to find out its religious role and values, on the basis of old historic books including Koryeo-sa (a book that demonstrates political affairs that took place during the Goryeo dynasty) and precedent researches.

M190084

**the study on the class of student's independent innovation under the perspective of
Interdisciplinary Platform**

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Keywords: Interdisciplinary, Problem oriented, Classroom design, independent innovation

Abstract:

Due to the obvious differences in the basics of students' disciplines under the interdisciplinary subjects, there are different blind areas of knowledge structure in thinking, and the traditional teaching methods can not meet the needs of reality.

This topic is a team-based approach that allows students to use the problem-based or project-based learning as the source of knowledge acquisition and the source of creativity, and to complete the challenges or tasks which design by teacher. Through comparative experiments, the independent innovation classroom has a significant effect on getting knowledge and innovation ability, especially for the cultivation of interest.

M190085

An analysis of body composition, calorie intake and consumption patterns of Korean college students

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Keywords: college students, consumption pattern, calorie, BMI

Abstract:

Background: Recently, Korean college students are experiencing hardships due to their irregular eating habit. As their dietary and calorie-consuming patterns are not consistent nor regular in particular, this research was conducted in need for an empirical study regarding them. The study aims to provide guidelines for college students to maintain healthy college lives as the study clearly defines Korean students' dietary and calorie-consuming patterns, and to lead them to participate in various physical activities by emphasizing the importance of moving bodies actively. The study chose Convenience Sampling Method and asked 200 Korean male and female college students to self-report their in- and out-calories. Then, the intake calories were analyzed with CAN-Pro 4.0, and burnt calories were analyzed by recording the actual physical activities the students carried out. As a result, in case of the normal range of BMI and dietary patterns of female students, the group that ate breakfast, lunch, dinner, and snacks (type 5) recorded the highest; for the overweight and male students, unlike the normal range, the group that ate lunch, dinner, and snacks (type 7) recorded the highest. Moreover, as the study looked at in- and out- calories separately, the group with out-calories showed high figures in the 1300s, and the group with in-calories showed high figures in the 2000s, both in the range of basal metabolism. For both male and female students, the numbers were revealed to be high in the out-calorie groups. The research result concludes that the group with the adequate body composition in accordance with the Korean students' nutritional intake and calorie consumption was the one that had three meals a day; the calorie intake of male students that had two meals a day rather than three was found out to be higher than that of the female counterpart. In addition, the groups that had three meals a day turned out to be doing more physical activities; therefore, it is very important that the students try to have meals three times a day on a regular basis, rather than choosing to develop a habit of having meals irregularly.

M190086

Exploring How Prospective Teachers Would Promote Students' Reflective Learning on Decimals

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Keywords: decimals, prospective teachers, reflective learning

Abstract:

Reflection enhanced students' mathematical understanding (Powell & Ramnauth, 1992). It was important for teachers to promote students' reflection in mathematics classrooms (National Council of Teachers of Mathematics, 2000). Little, however, was done to promote students' reflection in school mathematics, and even less was known about how teachers would promote their students' reflection in school mathematics (Jacobbe, 2007). The purpose of the study was to explore how prospective elementary teachers would promote their students' reflective learning on introduction to decimals.

Twenty-two prospective elementary teachers participated in the study. Data for this study consisted of the participants' lesson plans developed for third-grade students on introduction to decimals, designed reflective activities included in the lesson plans, and explanations about how they thought their designed reflective activities would promote students' reflection. The findings of the study showed that most of the designed reflective activities were included in the conclusion sections of the lesson plans, and the first rank of the designed reflective activities was mathematical problem solving. More studies are needed with a larger group of participants to understand better how prospective elementary teachers would promote their students' reflective learning on introduction to decimals or other content areas. It also would be beneficial to research how to improve prospective elementary teachers' ability to promote their students' reflective learning on introduction to decimals or other content areas.

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M190087

Association between oral health behavior and periodontal disease in Korean adult

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Keywords: periodontal disease, Korean adults, oral health behavior

Abstract:

Background: Many studies have shown that periodontal disease is the source of chronic disease. As a result, the physical health of the periodontal disease is threatened. Based on this, it is essential that oral health action for healthy mouth is essential, and it is important to prevent and treat periodontal disease. Therefore, this study conformed the prevalence and risk of periodontal disease according to oral health behavior.

Objective: The purpose of this study was to analyze the effect of oral health behavior on periodontal diseases in Korean adults. This study was to investigate the importance of oral health behaviors in Korean adults and to provide necessary data for oral health care program policies for the national level.

Method: The subjects of this study were 5,945 adults aged 19 and over who had undergone physical examination and oral examinations and received periodontal biopsy using data from the National Health and Nutrition Examination Survey (2015) This study performed chi-square and binomial logistic regression analysis.

Results: Firstly, in the characteristics of the oral health behavior have shown difference of distribution in periodontal disease prevalence rate in toothache experience, using of dental floss, oral examination, preventive treatment, gingiva treatment, tooth brushing, self-oral health smoking, non-drinking. Secondly, by the result of analyzing effect of periodontal diseases by binomial logistic regression analysis, sex, age, toothache experience, using of dental floss, oral examination, preventive treatment, gingiva treatment, self-oral health smoking, non-drinking have been shown to influence periodontal disease and it was statistically significant.

Conclusion: In conclusion, it was found that the prevalence of periodontal disease and the risk of periodontal disease were high and related to oral health behavior. These results suggest that Korean adults need to be interested in oral health and that oral health action should be considered to prevent periodontal disease and promote oral health.

M190088

Exploring Prospective Teachers' Different Approaches to Promote Creativity and Mathematical Creativity

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Keywords: creativity, mathematical creativity, prospective teachers

Abstract:

“The essence of mathematics is not just producing correct answers, but thinking creatively” (Ginsburg, 1996, p. 185). There was no doubt that mathematical creativity played a vital role in today’s modern society. More and more technology advancement resulted from mathematical creativity. For most students, mathematics, however, was considered nearly least associated with creativity (Silver, 1997). Although study of creativity has been popular for decades, there has been lack of attention to mathematical creativity among students, teachers, and researchers (Even, Karsenty, & Friedlander, 2009). It is important to investigate whether and how teachers would regard and promote their students’ creativity and mathematical creativity differently. Such information is important because it could be of assistance in developing creative teachers and students.

The purpose of the study was to explore prospective elementary teachers’ different approaches to promote their students’ creativity and mathematical creativity. The participants of the study comprised twenty-one prospective elementary teachers. They were asked to write down the approaches they would use to promote their students’ creativity and mathematical creativity on a questionnaire. The findings of the study indicated that the participants would use more approaches to promote their students’ creativity than to promote mathematical creativity. Moreover, the greatest proportion of the approaches to promote students’ creativity and mathematical creativity was to establish a motivating atmosphere and to encourage multiple solutions to mathematical problems, respectively. More research needs to be undertaken to understand better prospective teachers’ approaches to promote their students’ creativity and mathematical creativity.

M190089

Digital Technologies as Possible Tools to Promote the Sustainability of Intangible Cultural Heritage – Focusing on the Case of Korea

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Keywords: intangible cultural heritage, digital museum, digital heritage, digital technologies

Abstract:

Recently, the importance of preserving cultural heritage for sustainable development has been widely acknowledged by international society, as clarified in the UNESCO Convention for the Safeguarding of Intangible Cultural Heritage 2003. Intangible cultural heritage is particularly vulnerable to deterioration and destruction in that it can be disappeared or extinct at any time if not properly preserved and transmitted to the next generation. Fortunately, this weakness can be overcome by digital technologies, which has drawn scholarly attention. Hong (2017), for example, focused on the use of digital technologies for museum exhibitions; Lee (2016) likewise reported the present condition of digital heritage as museum contents. This paper explores the possibility of technologies being applied to promote sustainability of intangible cultural heritage. It examines diverse kinds of intangible cultural heritage in Korea which is inscribed on the UNESCO World Heritage List, and suggests ways to realise digital exhibitions regarding these heritages using the state-of-the-art technologies at museums. The ultimate aim of this article is to contribute to the sustainability of the world intangible cultural heritage for the humanity through digital exhibitions.

M190090

How to Develop a Training Model for Studios of Inter-disciplinary Design and Teaching

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Keywords: Design education, Interdisciplinary, Education model, Studio construction

Abstract:

Today designers need the ability to solve problems comprehensively more than ever. However, the traditional way of narrowly-focused and linear education is unable to meet the requirement on the ability of students in design majors to innovate and practice in systematically solving problems. Inter-disciplinary research and collaboration has become an important teaching method for nurturing students to comprehensively solve problems, design and innovate. This paper analyzes the current developments and shortcomings of the inter-disciplinary teaching practice with collaboration between industry and academia in China, as well as the experience and models from related colleges from other countries. Based on this, the objective of teaching and training for inter-disciplinary and innovative talents is put forward. With the integration of commercialization, teaching and research, through the collaboration of teaching-centered teachers and practice-centered teachers, and through teaching characterized by dynamic curriculum, a training model for talents of inter-disciplinary design and teaching studios is developed, in an effort to adapt to the need for integrating multiple disciplines in current design education. In addition, based on this, we discuss the effects of teaching at inter-disciplinary studios in motivating students to grasp the requirements of design projects more comprehensively, to understand the place of their own disciplines in the overall project, and to leverage the advantages of their own disciplines within comprehensive design projects.

M190091

Exploration and Construction of Experimental Teaching Mode in Design Sketch Teaching

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Keywords: Design Sketch, Experiment, Teaching

Abstract:

At present, art design majors are still discussing the problem of design sketch teaching, and gradually agree with the teaching methods of these subjects. Experiment and design sketch teaching has many common features, the experiment can provide scientific mode of operation, for the design of sketch teaching therefore, we further propose a method of experimental design sketch teaching in the teaching on the basis of research. We have put forward the concrete experiment project, experiment principle, experiment material and so on, and introduced the concrete teaching route and method from the subject student experiment and verification to the implementation of the scheme.

M190092

A Study on Exploring Interdisciplinary Educating

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Keywords: Inter-discipline, education, Innovation

Abstract:

The concept of inter-discipline is no longer unfamiliar under the background of trans-boundary integration. Interdisciplinary teaching has its advantages in several aspects such as quality education, subject assistance, it also shows its unique significance in the background of network and information. In addition, conducting research with interdisciplinary knowledge is the important driving forces of innovation and technology, since the study with single knowledge background can no longer meet the development of the times and social needs in the growing developing intelligent science and technology and information context. Furthermore, cross-disciplinary educating is the practical and effective promotion in innovation and entrepreneurship. The interdisciplinary knowledge could build a solid foundation of knowledge so that the follow-up development can be more sustainable. The key research question of this study is how to better implement the interdisciplinary education of the relevant teaching mechanism in higher institution and universities, so that it can promote more opportunities for the existing discipline from perspective of other discipline. This paper focus on discussion on several aspects of interdisciplinary education: educational function, subject system, mechanism and implementation. The aim is to reveal the existing problems during interdisciplinary educating activities and seek for the solutions. By studying the cross-disciplinary education system this study tries to seek the suitable training mode of interdisciplinary educating for China, so that it can play a more active and optimized role in in higher institution and universities.

M190093

Development and Sharing of Soft Resources of Aesthetic Education Curriculum in Chinese Universities

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Keywords: Chinese universities, aesthetic education curriculum, soft resources, development, sharing

Abstract:

The aesthetic education curriculum resources are the foundation and premise of the implementation of aesthetic education in Chinese universities. It includes hard resources and soft resources. Among them, the soft resources of aesthetic education curriculum are the core factors affecting the quality of aesthetic education in Chinese universities. This paper analyzes the relationship between the soft resources of aesthetic education curriculum and the quality of aesthetic education in Chinese universities, and investigating the problems of storage quantity insufficiency, distributed imbalanced and low utilization rate of soft resources of aesthetic education curriculum in Chinese universities. Based on, the author proposes several strategies to strengthen the development of soft resources of aesthetic education curriculum in Chinese universities and realize the sharing among various universities.

M190094

**A Study on the Advertisement Design for Architectural Interior Spatial Conditions in Shun Pao
During 1912-1949**

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Keywords: Shun Pao, Architectural Interior Spatial, Advertisement Design

Abstract:

In the first half of the 20th century, the Chinese society fell into colonization under the continuous economic and cultural aggression from imperialist countries. Shanghai successively set up a number of international settlements and became a contending focus for countries. The intense economical competition between China's national bourgeoisie and imperialist countries enabled the advertising industry to achieve its prosperous stage, while newspaper advertisement was the advertising media with best price and great communication effect at that time. A large number of various advertisements were delivered on the influential Shun Pao with many of them adopting marketing approaches via stories in architectural interior space scenes, thus to stimulate and guide consumers to know and enjoy the products. The Study, upon the advertisements of architectural interior spatial conditions in Shun Pao during 1912-1949, will probe into and analyze both application trend and features of the advertising design.

M190095

Discussion on the Cultivation of Creative Thinking for Art College Students in China

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Keywords: College Education, Art Students, Creative Thinking

Abstract:

Art is a major based on aesthetics and technology. However, most college teaching in China focused on the cultivation of students' professional skills, while their aesthetics were barely not improved. It is believed that the cultivation of art students should pay more attention to the development of their imagination and creativity than the pure professional level to make the students create better works. Firstly, this paper explains the importance of the creative cultivation of art students in Chinese universities. Then investigating was conducted on the current situation of the art students to find out the problems. Finally, suggestions were given from aspects of teaching concept, training plan and teaching plans based on the ideas of British psychologist Voras.

M190096

A Hybrid Model for Evaluating the Performance of the Collaborative Design Process of Interdisciplinary Teamwork in Design Education

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Keywords: evaluation methods, collaborative design, interdisciplinary teamwork, Grounded Theory, DANP-mV model (DEMATEL-based ANP with modified VIKOR model)

Abstract:

Evaluating the performance of the collaborative design process of interdisciplinary teamwork is one of the most important issues in design education in institutions of higher learning. However, in the past, the evaluation of collaborative design relied mostly on subjective and qualitative methods, which do not assess the degree of correlation between different indicators and thus lack persuasiveness. The question then is that in view of this, which types of design assessment methods are most suitable for evaluating the performance of the collaborative design process of interdisciplinary teamwork in design education? Given the premise that previously proposed evaluation methods are inadequate, this study integrated Grounded Theory (GT) (Sociology) and the Decision Making Trial and Evaluation Laboratory-based analytic network process with modified VlseKriterijumska Optimizacija I Kompromisno Resenje (VIKOR) (DANP-mV) (Operator Research) in order to analyze their advantages and compatibility with each other. Further, the study attempted to develop an evaluation method that combines qualitative and quantitative approaches called GT-DANP-mV, and demonstrate its effectiveness in evaluating the performance of collaborative design through an empirical case study of the collaborative design practice of interdisciplinary teamwork in Macau. The research results indicate that this approach is effective in ensuring the availability of all indicators in the same system for observation and analysis during the evaluation process. It also significantly enhances the “specificity/effectiveness” of the evaluation indicators. The evaluation method takes advantage of the features of GT and DANP-mV and uses them to address different issues in various stages of the evaluation process so that they can complement each other. Moreover, GT-DANP-mV is able to “plant” concept of the sustainable improvement into the evaluation process, which can provide continuous improvement strategies for existing interdisciplinary teams. The implications of the GT-DANP-mV model for training and practice of the collaborative design of interdisciplinary teamwork are discussed.

M190098

Cultivation of Critical Thinking in Engineering Undergraduate Education of China

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Keywords: Undergraduate Education, Engineering Students, Critical Thinking

Abstract:

The undergraduate education of Chinese engineering students was always paid more attention to the accumulation of knowledge, the main teaching method is imparting knowledge that to let students accept the existing knowledge. This kind of education ignores the critical thinking cultivation of students and leads to the lack of ability to think and innovate actively. In order to improve the training effect of critical thinking in engineering undergraduate education in China, this paper first presents the connotation of critical thinking and its importance in engineering education. Then the critical education status of engineering undergraduates in China was investigated and analyzed to summarize the experience and shortcomings. Finally, suggestions for improving the critical thinking training of engineering undergraduates in China were given from the aspects of training plan, teaching method and assessment method.

M190099

The Inheritance Of Taiwanese Mazu Costume Based On The Actor-Network Theory

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Keywords: Mazu costumes, Cultural heritage, Actor-network theory

Abstract:

In the past, most of the research on Mazu costumes stayed in the historical literature and the influence of Godhead on the structure of costumes. God's costume language is a reflection of people's reverence for nature. Therefore, this study turns from the perspective of a single imperial power to the current ecosystem of Taiwan's Mazu costumes through the interactive worldview of actor-network theory, and will include the "people" and "things" in the process of designing and inheriting Mazu's costumes in the same position. In a connected way, the people can understand more about the current appearance of Mazu costumes, the social functions of Mazu costumes, and how the Mazu costume design process works, thus stimulating people's awareness of the protection of Mazu costumes and the correct value perception.

M190100

Study on the teaching of integrating southern Hunan Folk art into artistic design

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Keywords: Southern Hunan Folk art, artistic design, Study on the teaching

Abstract:

At present, folk art is confronted with insuring predicament of no inheritance. The inheritance and innovation of folk art heritage requires the Government's attention and the attention of all sectors of society, as well as the initiative of universities. Under the realistic background of the transformation and education reform of colleges and universities, from the point of view of teaching and talent training, this paper focuses on the theoretical and practical problems of integrating Hunan folk art into the teaching of art design in colleges and universities to promote the reform of education and teaching of art design major in colleges and universities, take the initiative to bear the responsibility of folk art inheritance and innovation, so as to cultivate high-quality talents to find a realistic and feasible path.

M190101

Animation Sketch Education in Canada and Its Inspiration to Chinese animation Education

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Keywords: Key words: Canadian animation education, Sheridan College, Animated sketch, Nicolaidides

Abstract:

Canadian animation education has a certain reputation in the world. Most researchers gave much attention to its animation technology and concept, but less research on animation basic education, especially animation sketching. Author research some samples and analyzes Canadian animation course through the concepts and works, and provides a new idea and reference to enhance Chinese animation basic education.

M190102

The inheritance and development of Chinese traditional handicrafts -- taking Ming-style furniture as an example

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Keywords: Ming-style furniture, Chinese traditional handicrafts, education inheritance, development

Abstract:

At present, the society is in the period of transition from handicraft industry to machinery industry. Traditional handicrafts have been gradually replaced. Therefore, effective inheritance and protection are the main problems faced by traditional handicrafts at this stage. Throughout history, Ming Dynasty was the prime period for the development of traditional handicraft industry. Moreover, furniture made in Ming Dynasty reached the peak of its development. It was unparalleled in the world history of furniture making. Its styles and features have been adopted to this day. This study explores the inheritance and development direction of Chinese traditional handicrafts at the present stage through the analysis of the competitive advantages of Ming Dynasty furniture, from the external inheritance protection of education and government , as well as the internal transformation and innovation of traditional handicrafts.

M190103

The Analysis on the Operation Strategy of Educational Bookstore from the Perspective of Place Spirit

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Keywords: Place Spirit, Educational Bookstore, Operation Strategy

Abstract:

In the past of decade, the rise of the Internet and the rapid development of digital publishing, and e-commerce platforms have caused a tremendous impact on the traditional educational physical bookstores. A large number of traditional education bookstores are facing the crisis of high awareness, low recognition and brand aging. This paper Based on the deconstruction and interpretation of the place spirit, and combine the brand development status of educational bookstores, to explores the management strategies of educational bookstores. By the methods of grasping spatial characteristics, constructing spiritual connotation and embracing internet business in educational bookstores, the result of paper looks forward to providing reference and inspiration for the development of Educational Bookstore in the new era.

M190104

Practical research on project teaching in packaging design course

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Keywords: Project teaching, packaging design, paradigm research

Abstract:

[Abstract]Packaging design is an applied design course. Project teaching is a teaching method that combines theoretical teaching with practical operation. It is applied to packaging teaching. Take the whole project as the carrier, changing the deficiencies of traditional teaching methods and effectively improving teaching efficiency and effect. This paper discusses the practical arrangement, method and content of project teaching in the packaging design course , and makes systematic research and induction to form the curriculum teaching paradigm, and provides reference for curriculum reform.

M190105

Research on the combination of collage and narration in children's painting

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Keywords: collage, narration, children's painting, art creation

Abstract:

In the creation of children's paintings, collage as a means of artistic creation combining with narration, is to establish a link between visual language and literary language. Starting from the historical development and theoretical basis of collage, this paper carries out the study of children's painting combining collage with narration through specific cases. It adopts two ways: one is based on subject and the other on non-subject. It uses visual images to perfect narrative expression then finally finish art creation. This paper attempts to establish a creative mode of children's painting combined with visual language and literary language.

M190106

Research on Inspiring the Learning Motivation of Online Vocational Skill Learners - Analysis based on variable ratio reinforcement theory

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Keywords: variable-ratio reinforcement, Learning motivation, Online vocational skills education

Abstract:

Since 2016, China's online vocational training industry has entered a period of rapid development under the joint promotion of many factors. However, behind the rapid development of the industry, many companies have neglected some of the characteristics of learners, resulting in not being able to serve learners well. Online vocational skills learners have a strong internal motivation in the early stages of learning, but under the influence of many factors, the learning motivation will slowly fade away. At this time, some external factors are needed to stimulate the learners' motivation. Based on the variable-ratio reinforcement in Skinner's reinforcement theory, this paper will study the characteristics of online non-degree vocational skills learners' learning motivation for online vocational education. Provide a theoretical basis for online vocational education companies to provide better services to learners.

M190107

Research on Sustainable Behavior Design Strategy from the Perspective of Visual Cognition

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Keywords: Visual recognition, Sustainable design, Behavior design

Abstract:

Starting from the active level of design, this paper analyzes the sustainable design from the functional boundary to the ethical realm from the perspective of visual cognition. The capital logic returns to the life logic, and the product design moves towards behavior design. The expansion space for sustainable design will be broader. Starting from the visual cognition mechanism and behavioral production model, we analyze the design strategies that can be implemented in sustainable behavior design, and use visual elements such as styling, color, and texture to design through visual attention, behavioral limitation, and emotional continuity. The strategy can effectively achieve the design goal.

M190108

Preference Study on the Healing Products of the Singleness Office Workers Lifestyle

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Keywords: Singleness office workers, Lifestyle, Healing style products, Preferences

Abstract:

The world has entered the era of the Singleness. Because the social and environmental factors, values and lifestyle, led to the decline of marriage in Taiwan, Singleness population gradually rising. How to make these Singleness office workers relieve stress and adjust negative emotions has become a very important issue, so to relaxing and psychological comfort of the healing style product is born. In view of this, this study will aim for Singleness workers of different lifestyles, to find out the preferences of healing style product. First study the relevant literature, understanding lifestyle, healing definition and characteristics of product and preferences, as the basis for the design of the questionnaire. After the survey, through the SPSS statistical software, analysis of the different groups of healing product preference factors from Singleness workers. The results show that Singleness office workers lifestyle could be divided into three groups, namely 'confidence trendy group', 'retain impulse rational group' and 'enjoy science and technology group'. Overall, the healing products for the unmarried white-collar is full of fun and impressive, with a cute and glamorous look and having the ability to convert negative emotions. In the future, this study expected the results in design principle could offer some preferences reference to the product designer when they design healing products for the Singleness-office-worker.

M190109

Comparative Study on the Usability of Interface about Tourism Apps

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Keywords: Tourism Apps, Interface design, Information search, Usability

Abstract:

With the advent of the era of information sharing, more and more people prefer Self Tour. When tourist making decision in the whole tourism process, information search is an important thing, tourists can get information such as bookings, reservations, routes, places to visit and places to recommend from the tourism apps. Therefore, the interface design for information search of the tourism apps directly affects the quality of the travel experience. This study mainly discusses the usability of interface design about Tourism App. Select three tourism apps : "Qunar", "Ctrip", "Airbnb", as experimental samples for usability test, the results of the study are summarized as follows:(1) There is a significant difference in the performance of the hotel's price range, and Airbnb is worse than the other two. (2) There is a significant difference in the time performance of choosing a room type or a number of in-stores, Qunar is worse than the other two. (3) There is a significant difference in the time performance of finding a hotel to submit an order, and the comparison is that Airbnb is better than Ctrip, Ctrip is better than Qunar . (4) There are significant differences in the aesthetics of the interface, and Airbnb is superior to the other two.(5) There is a significant difference in the overall simplicity of the message presentation, and Airbnb is better than the other two. Finally, this study further based on the results above to find out the cause for differences , and puts forward some suggestions for the design of interface about Tourism Apps.

M190110

Research on sustainable design of preschool children's furniture based on developmental psychology

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Keywords: sustainable design, furniture design, preschool education, developmental psychology, environmental psychology

Abstract:

Preschool age is a special and critical period for children's development both on physiology and psychology, during which the growth environment will have important influence on children's lifelong development. As an important part of physical environment, furniture plays an important role in the cultivation of children's curiosity, creativity, good living habits and correct values in the process of children's use. After doing field and literature research, this paper analyzes the realistic dilemma of kindergarten furniture design and the general design research ideas, and puts forward a new idea concerning sustainable design of preschool children's furniture, which is based on children's development psychology, preschool educational theories and environmental psychology. By excavating the needs of preschool children's physical, cognitive and psychosocial development, the goal and value of sustainable design of children's furniture are re-examined. According to the field and content of "development", a target function system of kindergarten furniture is constructed to help the professional communication between designers and preschool educators. This paper analyzes the function mechanism of preschool children's furniture, and three ways of realizing approaches are concluded: (1) furniture works as an environmental factor and directly affects the development of children; (2) in a certain sense, working as a "teaching aid", it affects children's development in the form of "education"; (3) in a certain sense of "toy", furniture affects children's development by influencing their game behaviors.

M190111

Research on the Practice Effect of College Art Appreciation Course Based on SPOC ——A Case of “ Falling inLove Advertising – Advertising Art Appreciation”

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Keywords: SPOC, art appreciation, teaching effects

Abstract:

Abstract: College art appreciation courses play an important role in cultivating students' artistic accomplishments and comprehensive development. However, as far as the the traditional teaching at colleges is concerned, there exist some problems. For example, the students are absent-minded about the teachers' intentions. The lack of communication between teachers and students results in the latter's low enthusiasm for learning and the teaching effect is not significant. Based on the development trend of online learning and the SPOC teaching model in the teaching practice of college art appreciation courses, this paper preliminarily constructs the teaching mode and carries out the teaching practice for one semester as well as combines the teaching practice and then from the three dimensions of students, teachers and the environment analyze the key factors that influence teaching practice. At the same time, the article explores the ways to promote students' enthusiasm and initiative from the aspects of learning time, content, interaction, evaluation etc. It also corrects and perfects the teaching mode of college art appreciation course based on SPOC, aiming to provide reference for promoting students' comprehensive development and improvement in teaching effects.

M190112

The Influence of Stop Motion Animation on the Coherent Thinking of Preschool Children's Education

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Keywords: stop-motion animation, Preschool Children's Education

Abstract:

Preschool children are children from the age of 3 to 6 to 7 years old. At this stage, children are about to receive formal learning. During this period, the education received by children belongs to children's enlightenment education, and they learn and obtain in their lifetime. The ability of knowledge and the level of labor skills are extremely important. The stop motion animation is an art that combines vision, hearing and touch. It is different from other animation forms. The stop motion animation uses the means of continuous shooting to display the movements of various materials. The children need to watch during the viewing. Cognitive understanding of coherent thinking. The article analyzes the psychological behavior of preschool children and the characteristics of stop motion animation, and the effect of stop motion animation on coherent thinking in preschool education.

M190113

A Study on Sustainability of Earthquake-Damaged Cities by Examining the case of Kobe City in Japan

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Keywords: Sustainability, Disaster Management, Urban Regeneration, Community, Urban Design, Creative City, Kobe, Japan

Abstract:

The global trend shows in that as the population is concentrated in cities and the urban space is getting more expanded, the damages from natural disasters are increasing in numbers and their sizes. Therefore, systematic disaster management and comprehensive urban regeneration measures are required to minimize the damages and to promote sustainable development of cities.

But so far, studies on disasters and urban cities have focused on disaster recovery and urban reconstruction, focused on physical and scientific methods. The purpose of this study is to explore ways to create a safe community and urban foundations from a sociocultural point of view, aimed at sustainable urban regeneration after disasters going beyond simple disaster recovery and urban reconstruction.

In particular, we examined the case of Japan equipped with the advanced disaster management system. Japan takes it as a lesson through memories and records of the past disasters for further disaster prevention education and disaster drills that take place as a part of people's daily lives. Furthermore, it is remarkable that Japan seeks to develop its future by preserving the identity of local communities and the cities.

This study pays main attention to the case of Kobe City, which seeks sustainable development by overcoming disasters based on an intimate community and local networks after the earthquake of Hanshin and Awaji in 1995, and making it a creative city through urban design policy and waterfront development plan. This will help us derive sociocultural strategies and principles of disaster management as well as urban regeneration, and discuss how to make it possible for the sustainability of earthquake-damaged cities.

M190114

Production Korean traditional performing arts utilizing the locality of Osaka

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Keywords: Korean traditional performing arts, Osaka, locality, Gut

Abstract:

In Korea, "GUT" serves as a mediator between the living and the dead, or as a community ceremony for the peace and wellness of the village. In addition, gut is a comprehensive art which is based on traditional art composed of various elements such as music and dance.

When producing such performances using this traditional culture in overseas, it is always important to solve cultural barriers and to understand the local culture of the country. It is because it is possible to enhance the public's understanding by utilizing the localness of the country.

I have paid attention to that point and planned the contents of the performance by applying Korean traditional art "GUT" to the local characteristic of Osaka, Japan. The performances are based on the religious spirit of animism, in which all elements have spirits and took into consideration the characteristics of Japanese culture that are familiar with praying or making wishes in everyday life. In addition, we have actively used the locality of Japan. I will pay attention to and analyze such cases and discuss about expanding the cultural exchange between Osaka area and Korean traditional performing arts.

M190116

Community Cultural Properties as Sustainable Regional Developments: Case Studies of Community Involvements in Bukseong Village, Korea and Naoshima Island, Japan

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Keywords: Community Engagements, Sustainability, Local Resilience, Cultural Properties Developments

Abstract:

As the urbanization progresses and the post-industrialization accelerates, the diversity of the regions and its unique cultures are cultural properties of the city's competitiveness. The concept of cultural heritage and resources has expanded in these days. In the past it was confined as architectural and artistic artifacts, now cultural heritage and resources have evolved to include environmental elements, industrial and vernacular constructions, urban and rural settlements and intangible elements related to community activities and their ways of life.

Community is carriers of cultural resources and heritage. And the place of the cultural heritage has been contributed to build the community's identities. This multi-layered discussion on the community engagements in cultural heritage and resources provides the unique approach for the cultural properties as sustainability enablers.

M190118

The effect of using mouth guard on body alignment and balance ability in pro-basketball Athletes.

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Keywords: body alignment status, basketball players, static balance ability, dynamic balance ability, mouth guard, kyphotic angle, lordotic angle, pelvic balance

Abstract:

The purpose of this study was to identify the spinal and pelvic status of professional basketball players and to investigate the effect of mouse guards on balance and body posture. The present study selected 23 male basketball players who are members of the Korean Basketball League and they wear custom-made mouth guards. To determine the physique (height and weight), body type (body alignment status; 10 test valve), and postural alignment status (static & dynamic balance ability), a total of 3 measurements were taken; first test was performed when not wearing the mouth guard, second test was performed when wearing a mouth guard, and third test was performed when wearing a mouth guard after 8 weeks of wear. The data obtained at mouth guard wear status and measurement time point for each item were analyzed by repeated-one way ANOVA, while the Bonferroni method was used for post-hoc analysis($p < .05$). The results were as follows: 1) Changes of body alignment test : With respect to the results on changes in spinal and pelvic conditions, significant difference was found in pelvic torsion ($p < .000$) among the 10 variables, while significant difference in 1vs2 ($p < .015$) and 1vs3 ($p < .006$). With respect to kyphotic angle, significant differences were found in 1vs3($p < .001$) and 2vs3($p < .002$).

2) Changes of body balance ability : With respect to the measurement results on postural balance, almost all categories of static and dynamic balance showed significant differences whether mouth guard was worn or not (1vs2/1vs3/2vs3)($p < .000$). Based on the aforementioned results, it is believed that wearing a mouth guard have a positive impact on changes in body alignment and balance ability.

M190121

Teach Art Students to Code: Will the computational thinking boost the creativity?

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Keywords: Computational Thinking, Creativity

Abstract:

Teaching computational thinking is one of the most important strategies in STEM education. Students perform better in problems solving, systems building and solutions projecting within the benefits and limitations of computing tools. While it is generally regarded that creativity, especially in art and design field, is about "thinking outside the box". The paper proposed different opinion with viewing computational thinking and creative thinking as the same. Four students from different majors (all art and design related) and educational backgrounds (US and China) are selected as case studies. The goal is to promote a bridge between STEM education and art-based education.

M190123

The Transformation and Development of Visual Communication Design in Local Colleges and Universities from the View of Cultural and Creative Industry

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Keywords: cultural and creative industry, visual communication design, transformation and development

Abstract:

With the rapid development of cultural creative industry,market puts forward news requirements to visual communication design major in colleges and universities.Under such circumstances,visual communication design major not only should develop cultural creative industry to combine tightly with market,it also should promote the production -teaching-research integration to provide intellectual and talent support for the development of local cultural creative industry .

M190124

Study on Outcome of Audience Guide by Assistance of New Media: Using Cross-Domain New Technology of National Palace Museum as an Example

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Keywords: new media, display of museum, art education, audience guide

Abstract:

In the generation of technology, enormous amount of historical relics and national treasures in museum can no longer draw the attention and lead to active learning of audiences in generation of new media by traditional window display. The Appearance of new media essentially changes audiences' life style, food, clothing, housing, transportation, learning and entertainment. National Palace Museum thus focuses on audience orientation, innovative technology, new media Applied service and it attempts to Apply various types of digital technology media techniques of multiple and cross domains on service contact points of guide and display. This study analyzes digital channel, App development, AR , VR display and Cultural and creative development of National Palace Museum and explores new interpretation and Appreciation on artistic works in museum by new media technology and different aesthetic experience for audiences.

M190126

The Influence of Sports/Health Activity on Self-Esteem and Subjective Happiness: Focused on Elementary, Middle and High School Students

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Keywords: Sports/Health Activity, Self-Esteem, Youth's participation, Subjective Happiness, Extracurricular activity

Abstract:

The purpose of this study was to understand the current state of child and adolescent health activity and investigate the influence of sports/health activity on self-esteem and subjective happiness for the development of effective management methods. In order to achieve this purpose, Researchers used the National Youth Policy Institute (KCYPS) which conducted the subjects of total 10,506 (5,030 female and 5,476 male) by multi-stage stratified cluster sampling method. Researchers selected elementary, middle, high school students as a population and the study was conducted from May 22 to July 17, 2017, in South Korea. The data was analyzed by reliability analysis, correlation analysis, exploratory factor analysis, multiple regression analysis, and path analysis, with SPSS Ver. 23.0 Windows Program. The results were as follows: Firstly, sports/health activity had a statistically significant positive effect on the positive self-esteem and negative effect on the negative self-esteem which mean that more sports/health activity increased the positive self-esteem and decreased the negative self-esteem. Secondly, it was found that the higher the positive self-esteem, the higher the subjective sense of happiness and lower negative self-esteem increased subjective happiness. Lastly, the higher sports/health activity had a statistically significant positive effect on the subjective happiness which means that the higher sports/health activity increased the subjective happiness

M190130

Practice and Reflection on Green University Campus Planning from the Perspective of Sustainable Development—Taking a National University of Science and Technology in Taiwan as an Example

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Keywords: Green University, sustainable campus, Higher education, Campus planning

Abstract:

The concept of sustainable development has recently gained international attention. The concept of sustainable campus has emerged as a result of the emphasis on ecological and environmental protection. Campus sustainability has not only become a concern of university operators and planners around the world, but building a green university has also become an important direction for university education reform. As the concept of sustainable development is applied to universities, it should serve as a means of arranging the campus and its various activities so that universities can practice the needs of sustainable development and maintain these ideals for a long time in planning and action. This paper takes a science and technology university in central Taiwan as a case to explore the development and practice of promoting the campus of green university, and the problems and challenges it faces in its existing campus and infrastructure, and to reflect on it as a future development of campus planning.

M190131

Predicting Learning Outcomes with MOOCs Clickstreams

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Keywords: MOOCs, Clickstream, Behavior Pattern, Machine Learning

Abstract:

Massive Open Online Courses (MOOCs) have gradually become one of the dominant trends in education. Since 2014, the Ministry of Education in Taiwan has been promoting MOOCs programs with successful results. Due to its self-paced mode, however, the low completion rate of MOOCs has recently become the focus of attention. The mechanism to effectively improve the course completion rate continues to be of great interest to both teachers and researchers.

In this study, we generated a sequence of learning behaviors of learners by using their video clickstream records on the MOOCs platform to find patterns in the learners' cognitive participation. Then, we built practical machine learning models using K-Nearest Neighbor, Support Vector Machine, and Artificial Neural Network algorithms to predict learning performance through student learning behavior. Using these models, we were able to determine the relevance of video viewing behavior to learning outcomes in order to assist teachers in helping learners who need additional support to pass the course.

M190132

Exploring the importance ranking of mixed reality needed functions on engineering education and training.

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Keywords: engineering training and education, virtual reality, augmented reality, mixed reality, Quality Function Deployment

Abstract:

Digital content design and cultural creative design in Taiwan have come out of multiple features and are regarded as important industries in the next generation of science and technology innovation and services, especially VR and AR. While VR/AR currently have many innovative and successful applications, however, most of them still focus on entertainment-related interactive experiences or commercial services at the moment and have not moved VR/AR to a more comprehensive application and innovation direction. In Taiwan, most enterprises' engineering education and training are still based on traditional physical and real simulation. Although this approach could be close to the operating environment and engineering operations, it still has diverse problems need to solve. For instance, engineers have to stay in a place and focus on the training for a long time. Therefore, it probably would influence their life and work, even affecting health.

The purpose of this study is to aim at exploring the mixed reality needed functions on engineering education and training, and further to analyze the importance ranking of functions. The methods in this study could be separated into two parts. First, we analyzed the current needs of engineering training that are needed and not yet solved, and further asked the engineers to involve the KANO Model questionnaire test to select which could be solved by MR technology, and have high necessary and attractive. Secondly, based on the previous results, we utilized the QFD (Quality Function Deployment) matrix to analyze the importance ranking of functions. The results of this study could be used as a reference for researchers who want to utilize AR/VR for engineering education and training development in the future and provided the case study on KANO model and QFD application in the different research scope.

M190134

The Application of TensorFlow Facial Recognition Technology in Education Assistant System

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Keywords: TensorFlow, Image Identification, Deep learning, Convolutional neural network

Abstract:

TensorFlow is an open source artificial intelligence system from Google Inc., which was announced in October 2015. With flexibility, high efficiency, and good scalability and portability, it can be applied to a variety of computing environments from smartphones to large computing clusters. It is currently used in many fields.

This study experimentally proposes a technical solution, based on TensorFlow to construct a convolutional neural network model for face recognition, and counts the number of faces identified, so as to quickly perform attendance statistics.

M190135

Study and compare Urban and Native Tribe Two Different Interest Communities to Learn Seediq's Weaving-- From the View of Technology Learning and Culture

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Keywords: Seediq's Weaving, Interest community, Inheritance of traditional skill, Cultural ecology

Abstract:

When people are worried about the rapid losing of traditional skills, they try to protect and conserve the cultural properties. However, it is difficult to maintain because the social life style has changed. How to cope with the social trend, while preserving traditional culture, will test people's wisdom and action strategies.

The Seediq tribe is a kind of Taiwan's indigenous peoples, their weaving is an extremely tradition. Women of the Seediq, weaving clothes and quilts for their families. Only good weaving skill can climb the Rainbow Bridge and reunion with ancestors after they die. However, due to the changes of society, the above-mentioned demand is gradually disappearing. So do traditional skills.

Government registered Seta Bakan as the Seediq's weaving inheritors, and started the learning project. But, at the beginning it was a dilemma that no ethnic people wanted to learn. Later, it was open to non-ethnic people, and attracted many urban people to participate in the 5 years learning project. After 3 years, She was invited to carry out a course to teach in her indigenous village. Both courses are the same teacher teaching the same skills. However, two courses had different cultural meanings and feelings due to the different backgrounds of the members and the learning environment.

Through the participative observation and in-depth interview, this study reached the following preliminary conclusions:

1. If the traditional techniques were limited to the frozen inheritance of internal tribes, it will not be able to adapt to today's society. Just like the beginning of this course, no tribes participated due to social changes.
2. Non-ethnic participants influence indigenous tribes. It stimulates the tribes to pay attention to their own culture, and helped to systematically translate the teaching methods of traditional skills.
3. Traditional skill learning is a rediscovery of old values for the tribe. Cultural elements and memories could naturally appear in the learning process. In this case, the re-enhanced weaving is mostly a kind of technical challenge for the non-ethnic community, but a process of "being a woman" for indigenous community.

M190136

A Study on the History of Morality of the Martial Arts in Korea

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Keywords: Korea, History of Morality of the Martial Arts, Confucianism, Chinese martial arts culture, Japanese Budo

Abstract:

Morality of the martial arts is a moral and ethical rule or regulation.

This study examined the aspects of the development and historical values of morality of the martial arts in Korea through a literature review, the main conclusions are as follows.

In ancient period, Korea's morality of the martial arts was formed through the foundation of Chinese Confucianism and Chinese martial arts were established. During the Joseon Dynasty period, a characteristic of a Joseon-style morality of the martial arts culture was revealed. But during Japanese occupation, through the Budo(Japanese martial arts) of education, morality of the martial arts of Budo was introduced in Korea. And no morality of the martial arts than Budo has made education was highlighted. After Japanese occupation period, the Korean style's morality of the martial arts was inherited from the influence of the morality of the Chinese martial arts culture and Japanese Budo.

Korea's morality of the martial arts was influenced by China and Japan, the Korean style of morality of the martial arts was succeeded which was shown in its historical value.

M190137

Exploring the entrepreneurial intention of science and engineering students in China: A Q-methodology Study

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Keywords: entrepreneur, entrepreneurial intention, Q-methodology, science and engineering students

Abstract:

Entrepreneurial intention, which is perceived to be a predictor of entrepreneurial behavior, is generally explored in the existing literature based on the theory of planned behavior and the intention-behavior model. Since intention as a psychological notion, it is important to investigate the motivation for developing entrepreneurial intention from a subjective perspective by referring to China, which adopts an economic development strategy based on “mass entrepreneurship and innovation”. Thirty Chinese science and engineering students participated in the study, which used Q methodology, a technology that aims to explore human subjectivity with a combination of qualitative and quantitative research. The participants shared their perspectives of entrepreneurial intention by sorting 32 Q sets of statements and a factor analysis. The aim of the study was to identify the different objective factors that determine Chinese science and engineering students’ entrepreneurial intention. Four distinct perspectives of entrepreneurial intention were revealed. These findings provided entrepreneurial instructors with a subjective approach to enhance science and engineering students’ entrepreneurial intention through entrepreneurial education.

M190138

Exploring the Talent Training Mode of Cooperative Teaching in Stereo Cutting and Fashion Design Courses

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Keywords: Stereo cutting, fashion design, course cooperation, talent training

Abstract:

Institutions of higher learning are regarded as important bases for the training of professional talents in fashion fields. With the increasingly fierce competition in fashion industry, there are also various challenges in the training mode of talents. Teaching reform has long been urgent. This paper expounds and analyzes the teaching reform ideas and methods of the stereo cutting and fashion design courses by analyzing the current situation and existing problems of the two courses. Through the exploration of the talent training mode of cooperative teaching of stereo cutting and fashion design courses, the single content and form of traditional professional courses are changed to enhance students' creative potential and the ability to adapt to market demands while improving the quality of teaching methods and teaching effects. The exploration of the cooperative teaching mode of courses has certain research value for the cultivation of innovative talents in fashion design.

M190139

The Study of Applying Kansei TRIZ Model to Innovation Design on Medical Auxiliary Product

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Keywords: Kansei Engineering (KE), K-TRIZ, TRIZ, Continuous Lateral Rotation Therapy (CLRT), Non-Ambulant patients

Abstract:

The present study integrates Kansei Engineering and TRIZ theory into K-TRIZ model, utilizes medical auxiliary product Flipod to solve turning and sleep problems for non-ambulant patients accepting home care, and proves feasibility of this model. It uses K-TRIZ model, and obtains two causal Kansei conception factors—"Turning" and "Sleep"—by virtue of Kansei Engineering Type I, interview and KJ method. Moreover, Kansei conception factor "Turning" is found through focus group. In terms of Improving Parameters, there are 7 Kansei conception factors associated with "Sleep". In addition, there are 5 Worsening Parameter. Then, TRIZ contradiction matrix is used to get 32 principles of innovation. Through expert discussion, it's found that 20 innovation principles conform to current product characteristics.

Therefore, K-TRIZ model is proved to be able to correctly provide direction for design and realize product innovation design model more close to demands. In practical verification of Flipod, two testees are found via MDAS, and the efficacy of turning patient is achieved by means of left and right air cushion inflation. Through four-week pretest and modification, way of inflation is changed into periodic inflation and deflation so that patients won't feel compression on the back. The modified air cushion color enhances patient's comfort. The most important effect is improving patient and care provider's sleep quality. Average turning frequency is reduced from 16-20 to 5 or less times per day. In this way, both patients and care providers will have better sleep quality and longer rest time. In addition, cost of auxiliary home-care devices is reduced by a factor of 8 so that patient's family economical burden can be lowered. Consequently, the medical auxiliary tool Flipod brings both physical and spiritual benefits.

M190140

Students' Perception of Using Digital Badges in Blended Learning Classroom

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Keywords: Q-methodology, digital badges, blended learning, higher education

Abstract:

The purpose of this study is to explore college students' perception of digital badges in blended learning and the influence of external rewards on their motivation and participation in learning, as well as explain their type of their perception of competition and ranking. A digital badges system with leaderboard ranking was implemented in a 10-week course during the 2018 Spring Semester offered by a Chinese mainland university for the fifty-four junior college students who participated in this study. Learning activities were carried out based on a combination of online and offline methods using the Moodle system. Q methodology was used in a single case study of the subjective experience of digital badges. Thirty-six Q-statements were selected from the comprehensive reflection of students' views of digital badges and divided into four themes (i.e. teaching and learning, learning evaluation, communication, and technological issues). The participants were asked to sort the statements to model their opinions in a modified rank-ordering procedure. Twenty-two valid sorts were entered for analysis. Three factors were identified and these represented groups of participants with similar views. All the groups identified mutual evaluation in the group as an effective instructional strategy in blended learning. Active learners had a positive perception that the badges encouraged and cultivated a sense of competition with more actively in blended learning. Skeptical learners generally believed the evaluation results that the badges did not reflect the true level of learning, but felt the innovation as a development trend. Negative learners with an inactive attitude toward blended learning felt that badges were troublesome, and they failed to mobilize motivate learning. The results of the study indicated almost all participants found digital badges authentic and innovative, although some had a negative perception. The results are discussed based on the view of the students at a local university in mainland China and the way their demographic characteristics related to their perception of digital badging programs.

M190142

**Innovation on Personnel and Education Promotes Innovation on Personnel Training and
Technogy Service Model**

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Keywords: Innovation on Personnel and Education, Industrial Park, Personnel Training, Technical Service

Abstract:

In the light of the problems of personnel training and technical services existing in the industrial park, the paper tries to explore the occupation education reform actively. Take the production-teaching-research base as a platform, innovate the mode of personal training and technical service, promote the sustainable industrial upgrading and the development of higher vocational education.

M190144

Evidentiality in Korean : From the Perspective of Information Management in mental space

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Keywords: evidentiality, Korean, information management, perception, knowledge

Abstract:

The theoretical concept of ‘evidentiality’ or ‘evidentials’ has been described as the linguistic encoding of the source of information. Recently a number of studies have begun to explore evidentiality phenomena in Korean. It is generally agreed that Korean has a set of inflectional suffixes that function as evidential markers e.g. -ney(yo), -kwun(yo), -ci(yo), -tey(yo) in hay(yo) style and that their uses in discourse are optional unlike such other grammatical categories as tense, speech levels and clause types which are obligatorily marked. However, Little attention has been given to explore evidential markers in Korean from the perspective of information management. Therefore, The present study will be undertaken in order to analyze the evidential markers in Korean from the perspective of information management in mental space.

The information in mental space can be classified into ‘perception’ and ‘knowledge’ and is managed in the four stages such as stage1:‘encountering unknown information by perception’,stage2:‘searching for the related information’, stage3:‘linking unknown information to related information’, satge4:‘fixed as knowledge’

A statement of perception by virtue of -ney(yo), -kwun(yo) in Korean is a sentence that presents content about an unknown situation or information perceived by the speaker who encounters a new situation or information while speaking. In the information management in mental space -ney(yo) refers to the stage1 and -kwun(yo) refers to the stage3.

Meanwhile, a statement of knowledge through -ci(yo), -tey(yo) is a sentence that presents content turned into knowledge. In the information management in mental space -ci(yo) and -tey(yo) refers to the stage4. Especially -tey(yo) demonstrates knowledge changed from information perceived by speaker.

M190146

A Study on The Value of Traditional Graphics in Visual Communication Curriculum in China

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Keywords: Visual Communication, Curriculum Development, Traditional Graphics, Value Research

Abstract:

Visual communication is a common major in Chinese design institutes. Its specialized curriculum includes: the basic training of visual elements, graphic design, multimedia and comprehensive design and so on. However, the design concept, method, technology, content and values of the whole visual communication education system are almost originated from the West and China has no local discourse power on design. China, on the other hand, has rich design resources represented by traditional graphics, which can be used to develop visual communication professional curriculum in local context. Its value not only lies in the teaching and learning of curriculum, especially in contemporary practice and inheritance of Chinese traditional design. In this way, Chinese local design theory and education system can be built while different from the western context.

M190147

A Study On The Blended Learning Model and Evaluation System of Design Science

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Keywords: Design Science, Blended Learning, Learning Model, Evaluation System

Abstract:

Design Science is a new subject in China, and its learning mode is still at a groping stage by both teachers and students. Blended learning is a learning method which combines aspects of online and face-to-face instruction. It can be used in the learning mode of Design Science to improve learning efficiency and effect. This paper explores the feasibility and concrete content used to construct the blended learning mode of design, and establishes an evaluation system, which is helpful for the standardization and innovation of the learning mode of design science.

M190148

Research on Animation Talent Cultivation Mode Based on Fujian Culture Inheritance

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Keywords: Fujian culture, inheritance, animation talent cultivation

Abstract:

Against the context of Fujian culture inheritance, this paper conducts research on the college animation talent cultivation mode, setting up series characteristic education modules based on undergraduate practical education, guiding students to understand Fujian culture from different aspects such as intangible cultural heritage, traditional life and modern humanities and form independent thinking in combination with inheritance, digging animation creative reconstruction performance focusing on Fujian culture, connecting Fujian culture heritage with animation branding, cultivating students' humanistic awareness, inheritance awareness, animation awareness and brand awareness, exploring the novel mode of animation talent cultivation of "culture + education + industry".

M190149

Exploration on “Post-figurative Culture” Teaching Reform of Animated Script Creation against the New Media Age

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Keywords: New media age, post-figurative culture, Animated Script Creation course, teaching reform

Abstract:

“The post-figurative culture” means that thanks to the strong receptivity of new ideas and new technologies, young people are superior to their teachers in many respects, given this, the senior should learn from their younger generations. Against the context of the current new media age, it is necessary to strengthen cultivation of new animation scriptwriting talents and exploration of new teaching methods. As a major animation course, Animation Script Creation plays an extremely important role in animation talent cultivation. Thus, this course attempts to explore “the post-figurative culture” reform against the new situation and new requirements, optimizing the curriculum system, innovating teaching channels, focusing on innovation principles, and adhering to Chinese principles, making teachers and students improve their roles, solving problems in the long-term traditional education methods against the new media age.

M190150

The role of peer assessment in improving effectiveness of ethics teaching and learning

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Keywords: peer assessment, ethics course, effectiveness, collaborative learning

Abstract:

Ethics issues has widely addressed in business, government, medical organizations, non-profits, and military. Ethics has significant effects on the abovementioned organizations in the numerous fields of functionalities, such as leadership, management, operations, and decision-making. Thus, teaching ethics become relatively important to education institutions. However, designing and delivering an ethics course challenges educators because of the complex cognitive nature of ethics. Moreover, assessing students' learning and improving education effectiveness in an ethics course remain underexplored. In response, this study firstly designs ethics curriculum and implements such a course in a college. Second, this study uses the methods of collaborative learning and peer assessment to help students effectively learn. The results show that peer evaluation technique in the context of collaborative learning benefits students in actively involvement and discussion for effective learning. For teachers, peer assessment increases interactions between students and students and teachers, which, in turn, help students develop their ethical awareness and accountabilities in a natural and effective manner. The suggestions and limitations are also provided.

M190151

The Seniors' Need for the third places: the Places for Happiness

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Keywords: Lifestyle, Senior, Kansei Engineering, The third places

Abstract:

In this study we present six considerations into practical design: 1. Mobility aids can be developed with record functions of walking paths and other health conditions. 2. Communication: Seniors health status can be regularly conveyed to the medical staff or linked with family and friends. 3. Modularization is the future production processes. 4. Existing products are generally expensive if it is lightweight. 5. Owners should develop a lightness mobility aid for convenient to carry. 6. Among commercial chain, the industry is never lack of design talent, government implementing regulation, education and publicity will Influence the product development and sales.

M190153

Exploring mobile augmented reality systems for Hakka cultural park

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Keywords: mobile augmented reality, Cultural experience learning, point of interest, big data

Abstract:

When the local governments actively promote the cultural assets of digital construction, they urgently need the value-added application of digital content to avoid gradually decreasing of the tourists in the cultural park. This study aims to use interactive technology to activate cultural parks and attract more tourists. The target area is based on the Xinwawu Hakka cultural preservation park in Zhubei City, Hsinchu County, and serves as a learning area for cultural experience. Tourists use their mobile phones which presents with Mobile Augmented Reality (MAR) technology and combines Points of Interest (POI) planned in the park to experience the characteristics of local culture and the connotation of cultural heritage. Therefore, the personal information and experience process of tourists are collected and analyzed through cloud computing and big data. This study firstly explores the App guide path through three fields: historical sites, artistic creation and natural health through field investigations and in-depth interviews. The MAR technology can combines LBS, 3D objects, audio and video, photo frame, scratching, website link and other functions. The subjects of pilot study was 65, and the experiment time for each participant was about 40 minutes. This study found that various age groups have different preferences among three guide paths, and tourists have significant personal preferences for POI. Finally, this research can monitor and adapt the POI's content through data analysis, as an important reference for user behavior analysis and personalized service.

M190155

Digital Shopping Drivers for Senior Citizen: An Empirical Analysis

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Keywords: Senior, Online Shopping, DOI Theory

Abstract:

This study is concerned with the online shopping experience of older adults in Taiwan. In 2018, Taiwan has officially entered the stage of an aged society as Taiwanese senior citizen old has been accounted more than 14% of the country's total population. The objective of this study is to understand the group of senior citizen in Taiwan as online customers, and this study explores senior citizen's adoption of online shopping experience with a quantitative research. Based on the innovation theory, there are five empirical characteristics can be perceived as adopting factor on senior shopping behavior - relative advantages, compatibility, complexity vs simplicity, trialability, and observability. Data collection focused on groups with older people aged over 65 years. The results have indicated that aged population impact consumer behavior related to online shopping experience.

M190156

Cognitive Apprenticeship Theory's Effects on Online Learning Courses

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Keywords: Cognitive Apprenticeship Theory, network environment, Online language courses

Abstract:

The diversification of information has given birth to a series of learning methods and learning platforms. The network has the characteristics of immediacy, openness, interaction and sharing, and has become one of the important learning channels. However, the network environment must be combined with the correct theory to play a better role. Cognitive apprenticeship theory holds that learning should be carried out naturally in real activities, environment and cultural atmosphere, and integrate people and learning environment, endow students with the ability of learning in real activities and cognition, and apply learning in the environment. This essay try to analyze the cognitive apprenticeship theory and the online language learning course, to establish a learning environment by bringing into situational demonstration, observation, listening, imitation, and imaginary environment, and to improve learning abilities that come from this established environment.

M190157

Research on the Popularization of Intangible Cultural Heritage in the Education and Teaching of Colleges and Universities

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Keywords: Intangible Cultural Heritage, education, Inheritance and preservation

Abstract:

Intangible cultural heritage is the historical treasure and cultural essence of a country and a nation. The inheritance and protection of intangible cultural heritage has been paid great attention by majority of countries. However, it is difficult to inherit and carry forward the intangible cultural heritage by relying on spontaneous protection and few national policies. Education is an important way for human beings to improve their production practices and integrate them into social practice. To achieve intangible cultural heritage succession in future generations, popularization the cultural via education system and means are vital.

This paper focus on tasks with Intangible cultural heritage in the general education curriculum system, such as: professional curriculum teaching, teaching methods exploration, multimedia intervention in innovation and dissemination, teacher composition and reform, practical innovation and, entrepreneurship and industrial integration. On the other hand, this paper discussed about the facing problems in implementation and proposed solutions. Facing the problems like lacking funds, the less-interests of modern people have made modern technologies and modes of communication more important during the educating process so that it can be effective and contribute to the inheritance of intangible cultural heritage. It is proposed that by combinning general educating with independent curriculum system for intangible cultural heritage, establish specialized independent research institutions and special funding through specialized discipline leaders, Special research projects and projects to create an integrated education model of innovation, entrepreneurship and cultural heritage, and pass on cultural connotations and humanistic feelings through modern operation models such as integration with the market and Internet business platform.

M190159

Discusses the eastern craft aesthetics concept in the university specialized teaching——begin with The essence and the naked

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Keywords: Arts and crafts, Oriental aesthetics, University education

Abstract:

This paper mainly discusses the differences between the eastern and western aesthetic concepts, and extends the thinking of Chinese arts and crafts in aesthetic concepts. In addition, the paper discusses the teaching of arts and crafts in university education.

M190160

**Comparison of the Development Process of Campus Planning in the Early Stage of School--
Taking Taiwan's New National and Private Science and Technology University as an Example**

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Keywords: Campus Planning, Universities of Science and Technology, Technological and Vocational Education, Early Stages of Establishment

Abstract:

As one of the important academic systems in Taiwan's higher education, vocational education is responsible for the nurturing mission of senior professional and technical personnel. Since the 1990s, the reform of the technical college and the technical college has been changed to the name of the university of science and technology. Although this has fully met the expectations and needs of the public for higher vocational education, it also officially announced that Taiwan began entering the peak of the expansion of higher education. However, as far as a good university comes, what it needs is not only the software concept of education and the reflection of education reform, but also the need for a good hardware campus plan to complement it, and consider the organic growth of the university campus. With sustainable development, we can truly develop high-quality and sound higher vocational education. Therefore, this paper attempts to use the multiple case study method from the perspective of the development history of Taiwan's vocational education, combined with in-depth interviews, literature and archive analysis, direct observation, etc., taking the case of four new national and private science and technology universities in the 1990s. Objects, to explore the development of the overall campus planning development process at the beginning of the school. To understand the development of the new vocational and technical campus type constructed by the higher vocational vocational education through campus planning, to illustrate the specific situation of Taiwan's higher vocational education practice in the campus space, and to rethink a higher vocational spirit and education orientation. The university campus and how to construct a good technology university campus ideal and original intention.

M190161

Developing a Learning Roadmap for Artificial Intelligence by Competence Set Expansions

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Keywords: Artificial Intelligence (AI), Competence Set Expansion, Learning Roadmap, Multiple Attribute Decision Making (MADM)

Abstract:

Artificial intelligence (AI)-based applications have recently emerged due to the availability of new technologies. Those applications can significantly improve the training speed of AI-based systems. Furthermore, the availability of the data needed to train these AI systems further enables AI-based applications to be implemented in the real world. AI and subsets that contain deep learning and machine learning are likely to be applied in many possible applications. Therefore, developing an AI learning Roadmap is critical for educational or research institutions as well as for companies. However, very limited or no scholar has presented an analytic framework to develop a learning roadmap for meeting above-mentioned training requirements. In order to solve the above problems, a decision support system based on hybrid multi-attribute decision-making (MADM) method is proposed. The goals to be achieved after the firms have fully developed the AI-competences, relationships between the goals, and appropriate curriculum to maximize the performance of goals will be derived. A case study for expanding the AI competence set of a leading Taiwanese research institute is provided to demonstrate the feasibility of this MADM framework.

M190162

A Genetic Algorithm for Target Coverage Problem in Directional Sensor Networks

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Keywords: directional sensor networks, target coverage, genetic algorithm

Abstract:

Directional sensor network is composed of many directional sensor nodes. Unlike conventional sensors that always have an omni-angle of sensing range, directional sensors may have a limited angle of sensing range due to technical constraints or cost considerations. Therefore, it is possible that when a directional sensor node is randomly deployed and scattered in the environment, some interested targets cannot be covered even if these targets are located in the sensing range of the sensor. We study the target coverage problem in directional sensor networks with rotatable sensors. A rotatable sensor in a directional sensor network is a sensor whose sensing orientation can be rotated to any particular direction. The target coverage problem is to achieve the higher coverage rate by rotating the sensor orientation while minimizing the active sensors after deployment. In this paper, we present a greedy algorithm-based target coverage scheduling scheme that solves the problem by heuristics. This greedy scheme is used as a baseline for comparison of performance. We then propose a target coverage algorithm based on a genetic algorithm that can find the better coverage rate while minimizing the active sensors to prolong the network lifetime by evolutionary global search technique. Simulation results showed that the genetic algorithm-based scheme had better performance than the greedy algorithm-based scheme in terms of maximizing the coverage rate and minimizing the active sensors.

M190163

Target Competency Indicators of Project Based Learning(PBL): Take Project Courses of Mechanical Engineering from Universities of Science and Technology in Taiwan as an Example

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Keywords: Project-based learning (PBL), vocational education, technical education, mechanical engineering practice

Abstract:

The study examines courses adopting a problem-based learning approach offered by departments of mechanical engineering in Taiwan's universities of science and technology, seeking to identify student learning outcomes and key competency indicators for courses of the type. Interviews and focus groups were administered to teachers of project courses. The results from the analytical hierarchy process showed 20 target competency indicators and four dimensions of learning outcomes specifically expertise, generic skills, teamwork skills, and attitude. The study found that expertise and attitude were more important than the other two dimensions, which was in line with the need of small and medium-sized machinery enterprises in Taiwan.

M190164

Development a Database of Frequently Used Emotional Vocabulary for Young Children

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Keywords: database, emotional, young children

Abstract:

The Children's Emotional Capacity Scale (CECS) (Wei, 2011) is a standardized rating scale assessed by teachers. Is it possible to apply artificial intelligence in assessing children's emotional ability and to establish the big data database of young children's emotional development norm? The purpose of this study is to develop a database of frequently used emotional vocabulary for children (DPOEV). Research methods include in-depth interviews, focus discussions, observation methods, and experimental methods. The research question is to answer if there is a significant positive correlation between DPOEV and CECS. The implementation process includes: (1) Develop emotional ability scripts based on 40 questions of CECS. (2) Design questions for children to reflect on each emotional ability. (3) Develop five assessing indicators for each emotional capacity of CECS. (4) Design 40 emotional theater experiments. (5) Randomly sampling 200 children aged 4-6 years. (6) Implement the 40 emotional theater experiments. (7) Conduct observer training. (8) Analyze the consistency of four observers reached 96.9%. (9) Complete the DPOEV reliability study. (10) Establish validity and reliability. (11) Sort out five level of the most frequently used emotional vocabulary for each emotional competency of the DPOEV. Results indicate that α of DPOEV is .75 and α of CECS is .98. In general, correlation coefficient between DPOEV and CECS is .82 reaching a significant level ($p=.04^*$). Specifically, ten competencies in terms of "Understanding Other's Emotion" are significantly correlated one another between DPOEV and CECS with $r=.76$ ($p=.026^*$). Conclusion is made that there is a significant positive correlation between DPOEV and CECS. The contribution of the study is to support that the DPOEV is valid for machine to measure emotional competency for 4~6 years old. Furthermore, emotional development norm will be automatically update due to DPOEV with machine learning.

M190165

Experiencing the Effectiveness of Empathy Teaching for Dementia Caregivers by Using Virtual Reality

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Keywords: empathy, dementia caregivers, virtual reality

Abstract:

At present, there are an estimated 270,000 people with mental disabilities in Taiwan. Health and Welfare Department (2018) estimated that the average number of people will increase by 10,000 in the future. Eighty of them will suffer from dementia. The proportion of elderly people over 90 years old who suffer from mental illness is higher than one third. So far, there is no complete research project to intervene and to improve its effectiveness with dementia experience activities. This study was designed to use the virtual reality to experience the various cognitive dysfunctions in patients with dementia in the first person. The empathy teaching virtual reality interactive content course design is an intervention measure. The study combined VR virtual reality glasses (HTCVive and DayDream) to experience the wise man (first person) and explore contextual learning to enhance the caregiver's empathy for dementia patients. The study found that 44 subjects had a 93.9% agreement for HTC Vive posttest. The subjects used the VIVE to experience and found that there was a significant improvement in the learning effect of the phenomenon of dementia ($p=.000***$). The post-test of 79 participants using the DayDream experience had reached 89.1% consistency. As a result, it was found that the DayDream empathy materials had reached the significant improvement in the learning effect of the phenomenon of dementia ($p=.000***$). The experience of caring for people with dementia is a factor that affects the effectiveness of empathy learning, reaching a significant level ($p=.000***$). Findings indicated that virtual reality immersive learning stimulates the learner's reflection, attracts the attention of learners and triggers the motivation of learning that traditional learning methods is unable to achieve.

M190166

Impacts of MAKAR Editing Platform on Innovative Teaching Aids in Learning Centers

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Keywords: MAKAR AR editing platform, learning centers

Abstract:

In addition to classroom learning opportunities, how technology can record children's own learning trails? The purpose of the study includes: (1) Innovate the MAKAR editing platform (MEP) "question, thinking trial, and sharing" (QTTS). (2) Generate big data to see children's interests and trigger learning motivation. (3) Explore factors influencing learning such as improving EQ, ability to solve problems, and so on. Data of the study is collected by the database of MAKAR Learning Platform (MLP) that is the methodology. When the user makes a selection, the system will automatically record the user's operation information (answer option, usage time and frequency etc.). After uploading to the database through MAKAR for analysis, the user's learning file is exported or used as a basis for future revision and improvement. One of the advantages of MEP developed by Miffy Multimedia in kindergarten learning centers is to make teaching aids to facilitate teachers. The virtual and real integration can also improve the learning motivation, and help children learn through sensory stimulation and interesting learning. This research is devoted to the study of virtual and real integration applications in kindergarten classrooms. This study designed nine emotional teaching theaters according to the nine competencies to understand own emotions (Wei, 2011). Moreover, the study individually inquired thirty 4~6 years old children for four questions each child based on creative thinking teaching process in terms of QTTS. The post-production teaching film contains the content of QTTS. Findings supported that MAKAR enhanced children's emotional ability reaching extreme significance of $p=.000***$. The overall reliability analysis on Cronbach's Alpha value is .747. The learning results of the experimental group reached a very significant level ($p=.002**$). The learning effect by using MAKAR was better than the traditional teaching. The difference of QTTS preference between children and teachers is extremely significant ($p=.000***$).

M190184

Applying Action Research to Develop Curriculum for Engineering Ethics Based on Moral Practice

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Keywords: engineering ethics, action research, Lawrence Kohlberg's stages of moral development

Abstract:

Engineering ethics is a new subject in engineering college. Some engineering professors do not believe they are qualified to teach the course. In addition, the general idea thinks ethics is not a subject can be taught. This project applied the methodology of action research to enhance the teaching influence. Five steps were applied to the course of engineering ethics and society to evaluate the effect of moral implementation. Based on the lecture of ethical theory and case studies, students explored how the development of science and technology impacts the society. Then, the students proposed a 21-day ethical practice to evaluate their ethical process. The procedure was recorded by students, a cooperative teacher, and lecturer's teaching notes.

Overall, compare with the previous semesters in the end of the semesters, the questionnaire results of this course are within the normal range; however, the failing rate is higher and the final grade average is lower than the previous classes.

Case study/discussion is an important method for students to understand the dilemma and critical points in the real life. Lectures should be well prepared including the pros and cons of the cases. Especially, how to create the way to make students speak out the points, not the instructors talking alone. In addition, create a safe and friendly environment to encourage all opinions. Do not define right or wrong answers based on our own moral opinions. The status of a lectures is there to support all students instead of being a strong opinion leader. Guide the students to see all the possibilities in a neutral position.

The student homework demonstrate that they are quite engaged into the class activities. Even though, the 21-day implementation had proven more troublesome than they expected, they began to get used to it and tried to persuade their friends and families to do so too. Moreover, they felt good that they can contribute to the Earth.

M190185

The Application Fuzzy Delphi Method to Summarize Key Factors in the Education of Construction Engineers

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Keywords: Construction Engineers, Fuzzy Delphi Method, Project Management

Abstract:

The construction industry is critical to the building infrastructure of a country and is highly related to economic development and the lives of the public. Because construction projects involve diverse works, the industrial environment of construction is more complicated compared with other industries, and its characteristics of project management are unique. This study analyzed teaching of seven subjects and performance indicators by collecting data from literature of diversified fields, proficiency training courses, and syllabi of construction management curricula provided by Taiwanese higher education institutions. Research incorporated both qualitative and quantitative methods. Qualitative approaches comprised literature review and in-depth interview with experts; the quantitative approach was the fuzzy Delphi method. Fuzzy Delphi Method was derived from the traditional Delphi technique and fuzzy set theory. The fuzzy Delphi method is derived from the conventional Delphi method; in the conventional Delphi method, the consensus value that represents expert opinion is only a concept of mean. This study can be referenced to design syllabi for systemic courses in departments of construction engineering and management to educate future construction engineers at higher education institutions.

M190189

Study on Design education using free-coding type microcontroller board

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Keywords: Design Education, Technical Application Design, Design Prototyping, Microcontroller Board, Prototyping Tool

Abstract:

As the scope of social expectations and roles in the design field has expanded, the demand for education to cope with changes in the technology environment is increasing in design education. In response to this trend, microcontroller board-type design-prototyping tools have also been introduced into design education, and much educational content is being developed. However, there is the perception that students who are majoring in design without engineering knowledge are still barred from entry. A variety of educational content and tools have been developed to solve these difficulties, although there are several limitations to their practical application. Especially, in the design education courses in universities, the functional expectation level for prototyping is high, but most of the content developed for solving the difficulties has been developed for the lower education levels, and it could be said that a great deal of learning is necessary to solve the problem. In this study, students were asked about microcontroller board utilization and their satisfaction with their design through questionnaires and with the developed microcontroller board development direction via Focus Group Interviews. Based on this, we tested microcontroller boards that eliminate the coding process and which students can use to create and prototype their work as a suggestion to fulfil demand. After using the board, both the usability and improvement of the product were checked. Confirmation of the usefulness of the free-coding-type microcontroller was obtained through this study along with the possibility of responding to various educational demands by applying the application design related to this product.

M190191

Using AHP to Investigate Qualitative Aspects of Business English E-learning Websites

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Keywords: AHP (analytic hierarchy process), Website quality, Search engine optimization (SEO), e-business success, English e-learning website

Abstract:

This study explores the website characteristics that are most useful to learners of English. Website characteristics include systems, information, access and service. Users are more likely to use websites that match their preferences. We used the analytic hierarchy process (AHP) to develop an evaluation model that prioritizes website quality factors, including system, information, access and service quality. The results revealed similarities and differences in the impact of system, information, access and service quality on website and search engine quality. System designers can use the results of this study as a reference to improve the appeal of their e-commerce websites. The results of this study can also be used by social scientists to identify cultural trends

M190192

Study on the Assessment Indicators for the Reuse of Chien-Cheng Circle in Taipei

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Keywords: Chien-Cheng Circle, adaptive reuse, assessment indicators, reuse plan, analytical hierarchy process

Abstract:

Previously, the Chien-Cheng Circle was demolished and rebuilt several times without meeting the needs of urban residents and businesses, causing constant contention over the methods of reuse. The goals of this study are to establish an assessment index and framework for the measurement of the adaptive reuse of the Chien-Cheng Circle, to establish an appropriate reuse program, and to analyse the perceptions of experts and interview participants regarding the adaptive reuse of the Circle. The results of this study reveal that the adaptive reuse of the Chien-Cheng Circle includes 13 assessment index items for the three dimensions of society, economics, and culture. Experts and interview participants ranked these elements in the following order: culture, economy, society and economy, society, and culture. This reveals that the experts are focused on the soft power of culture as a means of promoting adaptive vitalization opportunities. Furthermore, interview participants consider the economic element to be most in line with the relevant requirements. Regarding the results of the reuse plan, the ranking given by the interviewees is as follows: exhibitions, leisure space, and business activity.

M190193

Discussion on Reinforcement of Reinforced Concrete Slab Structure

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Keywords: Reinforced Concrete, Structural Reinforcement, Epoxy Resin, Carbon Fiber

Abstract:

Corrosion cracking of steel bars in the structure causes structural damage. It was repaired with cement paste or mortar in the early years. In recent years, it was repaired with epoxy resin mortar. When the cracks are peeled off, the surface repair parts will be peeled off together, and the function and purpose of repair will be lost.

In order to solve the damage caused by the above-mentioned deep rebar oxidation, this study proposes a set of improved methods. When the structure is repaired, the oxidized part of the steel bar shall be thoroughly derusted, and the bottom layer of the interface shall be coated with a high-permeability epoxy resin to fully infiltrate the surface of the concrete and the steel to create a protective bundle. The beam and the slab are then repaired with Carbon Fiber Reinforced Polymer (CFRP). Use angled anchors with L-shaped steel to anchor beams and slabs with small spacing. L-shaped steel and slab, beam gap joints are filled with epoxy resin mortar. H-type (125*125) small steel beam at a distance of one meter is applied as reinforcement at the short direction of the slab. L-shaped steel and H-shaped trabecular joint are bounded with CFRP as reinforcement. With the physical properties of epoxy resin repair materials (the volume will expand by 8% after chemical reaction), the perfect combination of concrete, carbon fiber patch, steel, and epoxy resin are completed. The construction method proposed by the study is currently applied in high-humidity areas, including the communities such as Linkou, Danshui, Neihu, Xindian and other mountainous areas. These projects have been completed for about 10 years, and the results of the reinforcement have been intact so far. At present, these projects have been examined by visual methods, tapping, etc., and there has been no peeling or internal expansion and peeling due to oxidation of steel bars. This reinforcement method can save construction cost and ensure repair effect, and can effectively maintain structural safety and extend service life of the buildings.

M190194

A Study on the sustainable development of historic blocks based on "urban catalyst theory"

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Keywords: Urban catalysts, historical blocks, linkage response

Abstract:

Urban renewal and transformation are carried out with unprecedented scale and speed. Historical blocks, as a precious legacy in the process of urban history, have their diversity and complexity. How to maintain the core needs of sustainable development has become the key issue and core focus of urban construction.

The historic district of the city has many outstanding cultural heritages, which are left by the historical changes, and also inevitably face the conflict with modern life. There are problems of traffic congestion, public environment sanitation and lack of public facilities and so on, which can not meet the modern life style and the current situation of the rapid development of the city. Through the comprehensive analysis of the "urban catalyst theory" for the sustainable development of historical blocks, the present situation of the complex old city in the renewal and development of urban historic blocks is analyzed.

Using the literature research method, the questionnaire survey method, the horizontal comparison method, the inductive analysis method and so on, the various current problems of the historical and cultural blocks are summarized and analyzed, and the generality and the law under the application of the catalyst theory are summarized, so as to facilitate the sustainable development of the protection and renewal work.

As a gradual guiding strategy, urban catalyst theory can solve the complex block problem in China to a certain extent. It can give full play to the positive possibility and continuous linkage reaction. Through the adjacent and close relationship between the vector, it can promote the sustainable development of the whole region. Then through the relevant research of actual cases, the theoretical framework of the protection and renewal of historical blocks of urban catalyst theory is constructed, and a new way of thinking and method guidance for the protection and renewal of urban historic blocks is provided.

M190195

A STUDY ON THE RENEWAL STRATEGY OF HISTORICAL URBAN DISTRICTS IN THE VIEW OF DAILY LIFE--TAKING THE HISTORIC DISTRICT of COLOANE ,MACAU. AS AN EXAMPLE

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Keywords: Macao Coloane, Daily life, living memory, historical district renewal

Abstract:

In the rapid process of urbanization, order and function are supreme. As the most representative historical district of regional and diversity, it is submerged under the precise geometric figure outline of the planning drawings. The neglect of the diversity and possibility of daily life has led to the rupture of memory in urban historical districts.

In view of this, through the study of the "daily life perspective" (historical urban renewal) design method, the historical urban area of Macao Coloane is updated as a case, and the method of empirical and research is carried out. Using the method of field investigation and questionnaire, this paper analyzes the spatial structure of historical urban area, the general situation of spatial distribution and the relationship of traffic path, and then reveals the characteristics of its spatial field. Through the reduction of life, return to life, from the bottom to the top of the city, looking for the essence of the city, and drawing on the research results in the field of philosophy and sociology, try to extract the renewal mode of the historic urban area based on the perspective of daily life, and summarize the design method and the original rule of the renewal model. From the perspective of daily life, we should pay attention to the daily life track of the residents, look for the spatial order hidden behind the space, optimize the tour route organization of the City Lane in the historic urban area, series the main historical heritage nodes, combine the art creation and tourism development into the new format to reconstruct the existing space and stimulate the vitality of the old urban area. And charm, at the same time, meet the dual needs of tourists and residents.

It provides a new view and possibility for the real grasp and understanding of the problems and contradictions in the renewal and development of urban historic urban area through the study of the renewal practice in the historic urban area of Macao Coloane. It provides a positive reference value for the treatment of the times and the practical significance of the urban renewal and development.

M190196

A Preliminary Study on the Influence of the Application of New Teaching Media on Children's Creativity Enhancement

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Keywords: Creativity, creativity teaching, teaching media, design thinking, 3D printing

Abstract:

The development and cultivation of creativity has become an important trend and the specific goal of education development. Many related studies in Taiwan and other countries have proved that schoolchildren's creativity can be enhanced through teaching processes. Thus, it is essential to understand how to adopt suitable teaching models. This research study introduced a new teaching medium, namely 3D printing, to a creativity course in an elementary school to explore whether the application of new media could effectively improve children's learning outcomes in terms of creativity.

Prior to the study, expert interviews were conducted to understand the assessment's content and the method applied in the creativity course. In the new teaching experiment, design thinking was considered to be the central principle of course planning, and 3D printing technology was used to actualize the learning outcomes. Fifth-graders were selected as the study's subjects. Through an actual teaching experiment, this study investigated whether the intervention of a new medium would influence children's creativity.

Before the experiment, the students were introduced to 3D printing experientially. During the course, it was found that the new medium and tool could sustain children's attention during learning. The official teaching experiment adopted task-based learning as the main teaching approach. Through the use of empathy, the students were guided in identifying problems and finding corresponding solutions. Their conceptualizations were then actualized using the 3D printing technology. Finally, expert evaluation was employed to identify differences between the students' performance in the new course and that in the conventional course.

The experimental results revealed that in courses where a new medium was applied, the students sustained attention for a longer period during the learning process and had greater enthusiasm for learning. Evaluation of their final products also showed that students in the new course produced better work than those in the conventional course.

M190197

The Exploration of "Zeyuan Art Education Sociology"

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Keywords: "Runze" Education Ideals, Zeyuan, Zeyuan Art Education Sociology, Zeyuan Naming, Zeyuan Going, Zeyuan Trending, Art Education Sociology

Abstract:

"Zeyuan Art Education Sociology" Mode is put forward by Professor Liang Jiu of Beijing Normal University. His "Runze" education ideals believe that education is a "benefit activity that helps people grow up with embellished wisdom" and "the main body of art education should use a variety of incidents to warm up the growth of scholars and artists". In practice, the sociological model of art education makes teachers and students form an academic community, which is called "Zeyuan" where the everyone of this academic community is placed in. Professor Liang Jiu is the gardener of Zeyuan. Every student who joins Zeyuan will be given "Zeyuan Naming", such as a name of a tree or a flower, a bird or a fish in the garden. At present, the doctor student is named a kind of tree, the master student is named a kind of flower, the visiting scholar above the associate professor is named a kind of bird, and the general visiting scholar is named a kind of fish. Zeyuan holds the "Zeyuan Going" reading meeting and the "Zeyuan Trending" art exhibition termly. "Zeyuan Art Education Sociology Model" believes that art education can not be separated from society, advocates that sociology should intervene in art education, "Zeyuan" itself is a complete and mature embodiment of art education sociology.

M190200

The influences of the environmental intention to act on emotions- Evidence from neuroscience

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Keywords: emotions, environmental intention to act, neuroscience

Abstract:

The purpose of this study is to explore the influences of the human's environmental intention to act on emotions by using the neuroscience technology. There are seventy university students participated in this study. All of them need to look at the positive or negative emotional environmental pictures and decide if they want to protect the environment more or not after looking at the pictures. The results showed that the positive emotional environmental pictures might promote the human's positive emotions, but that will decrease their intention to act to protect the environment. Oppositely, the negative emotional environmental pictures will increase the human's negative emotions, but that will increase the human's attention and intention to act to protect the environment. The further implications are discussing in this study.

M190201

color word association in Fujian and Guangdong

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Keywords: color word association, regional culture, red, color

Abstract:

The investigation of “red and chi” as color words has been a topic of constant discussion in Chinese. This study aims to understand the color perception of red and chi by investigating the color association of red chi color words in Fujian and Guangdong universities and high school students. The survey method adopts the questionnaire method of free association of color words. The study found that students from Fujian and Guangdong linked the “red” with “China.” The word “chi” is more general in terms of association. Different ethnic groups, the data obtained are slightly different. The most obvious difference is the data of Fujian Industry and Trade School, which is associated with red “medicinal materials.” The study found that the word “chi” is not only associated with red fruits and vegetables, but also includes “Yellow fruits and vegetables” (such as persimmons, oranges, and squash) The same survey can be used to identify the colors of the word “Chi” and can be used to conduct research on different age groups in the Guangdong region. Including the test of color tickets in combination with fruits and vegetables. It is also possible to conduct structured interviews on the subjects of the survey, sort out deficits as color perceptions, and shed light on the context of color words in the context of the Guangdong region.

M190203

A Highly Efficient E-book based on the Repertory Grids: Example by the Cherry Blossom of Taiwan

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Keywords: e-book, repertory grid, e-learning

Abstract:

A highly efficient e-book based on the repertory grids is developed in this study. The primary design principle is: helping the learners to construct their personal knowledge during the learning activity by using the repertory grids; enhancing the interaction between the proposed system and learners by combining image, audio-visual and multimedia elements into the learning materials. The cherry blossom of Taiwan is used as the learning objective of this study, and 70 students from 2 classes of college freshman in Tainan City are recruited as the study participant. In the experiment, the students are divided into a control group receiving related websites learning and an experimental group that employs the system developed in this study. To assess the proposed system, the learning achievement and a questionnaire analysis are conducted. The questionnaire includes attention, relevance, confidence, satisfaction. The learning achievement is assessed by using the t-test for pre-test and post-test. The experiment shows that the system can indeed enhance the learning outcome for the learners.

M190204

Linguistic differences in pre-service and in-service teachers' online reflections and the implications

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Keywords: Teacher professional development, Online reflections, Linguistic analysis, In-service teacher, Pre-service teacher

Abstract:

Reflections can make considerable contributions to teachers' professional development. They can also reflect teachers' inner thoughts and professional skills. In this study, we collected 261 in-service primary teachers' reflections in a teacher training activity about the application of information technology in teaching. And we also collected 141 pre-service teachers' online reflections in a course named "modern educational technology". These text reflections are analyzed by a linguistic inquiry and word count tool named to get the linguistic features. Then a comparative research was done between pre-service and in-service teachers' reflections. The results show that: 1. There are significant linguistic differences between pre-service and in-service teachers' reflections. 2. Pre-service teachers tend to use more first-person pronouns, achievement words and emotional words. They also have more words per sentence and wordcount in their reflections. 3. These differences could be helpful in teacher training.

M190205

Study on the Digitalization of Festival Culture in Taiwan Aboriginal Literature

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Keywords: Aboriginal literature, Aboriginal culture, Digital humanities, Field study, Action research

Abstract:

The concept of teaching practice in this project is intended to combine the profound teaching of "original teaching and research" with the practice of "creative teaching" and "innovative research" to promote the concept of "multi-intelligence digital humanities Ability, "and cultivate its practice of aboriginal cult culture, field investigation and humane care

Therefore, the curriculum of Aboriginal Literature is based on the awareness of" local and tribal culture and care ", (1)." Innovative teaching model, "that is, into" cognitive model "-" cognitive skills model ", (2)." Emotional model "-" ethnic humanities care mode ", (3)." Digital model "-" digital humanities and archives model " Students' "learner-based learning" flipped classroom and "problem-oriented learning (PBL)"; guide students to reflect on contemporary multicultural values and learn about holistic education and focus on people's core concerns.

The Taiwan Atayal and Thao Aboriginal ritual culture is integrated into the innovative culture education of Aboriginal literature, and students are led to participate in the field investigation of the ceremonies to complete the digital cultural documentary of the Atayal Thanksgiving and the Thao ancestral sacrifice to establish the innovative teaching goal of digital humanities education.

M190206

Constructing an Efficient Model to Inspire Design Education Sustainability in Rural Areas

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Keywords: Central kitchen model, MMAFS algorithm, rural areas, teaching equipment, design education

Abstract:

Advancements of information and communication technologies, as well as the reduction of computer prices, have brought computer-assisted design from applications by large manufacturers to education. The number of computer-assisted learning activities and research projects in developing countries and rural areas has been on the rise over recent years. However, there are very few studies focused on the design education of rural areas. Understandably, it is critical to establish a fundamental environment integrating design education and constructing an efficiently model to inspire design education sustainability in rural areas. By considering limited resources and the educational milieu prevalent in rural areas, this paper constructed a central kitchen model anchored in teaching equipment of design education and designed an algorithm for supporting the operation of this model efficiently. We analyzed the core algorithm MMAFS (A Memory Management Algorithm with Fast Speed) of model and comparing the MMAFS algorithm with the current popular Segregated lists algorithm and the Buddy algorithm by adopting the comparative analysis method, also demonstrated the feasibility of this central kitchen model through a case study. Given the large number of urgent and unresolved issues in developing countries and rural areas, it is essential to emphasize design education and encourage local design education specifically for rural communities and promoting a positive loop in the rural ecology through local designs.

M190207

A Study on Constructing Historical and Cultural Materials for Hualien Sugar Factory, Taiwan Based on Local Stories

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Keywords: Community Education, Community Facility, Establishment of Hakka Lifestyle Environments, Hakka Cultural Awareness, Hakka Cultural Involvement

Abstract:

In recent years, to revive the declining Hakka culture and establish Hakka lifestyle environments in Hakka communities, the Hakka Affairs Council has initiated a series of grant programs. From 2010 to 2018, Yunlin County Government and its township offices have received such grants for five Hakka cultural facilities, two of which have the capacity for educational purposes - the mid-scale county-level Zhaoan Hakka Cultural Hall and the community-level Yenyuan Community Hakka Cultural House in Lunbei Township. The present study is based on the two education-capable Hakka facilities, employing case study, comparative analysis, and questionnaire survey methods. The purpose of the study is to investigate the influence of the educational capability of the two facilities on Hakka culture in Yunlin County from three aspects, namely, the establishment of Hakka lifestyle environments, Hakka cultural awareness, and Hakka cultural involvement. According to the conclusion of this study, Overall, the community education facilities were more effective in establishing Hakka lifestyle environments and Hakka cultural awareness than in Hakka cultural involvement. Although the addition of the facilities has prompted more people to become involved in the promotion of Hakka culture and to value Hakka culture more highly, the people's involvement in the Hakka affairs in their communities remained insufficient. The percentages of community residents participating in events at Zhaoan Hakka Cultural Hall and Yenyuan Community Hakka Cultural House were 65% and 87%, respectively. Because Zhaoan Hakka Cultural Hall is not a community-level facility, we can infer that participants of events at the facility mainly comprised non-residents of the community, who came from other communities, counties, or cities. By comparison, because Yenyuan Community Hakka Cultural House is positioned as a community-level facility, it was more effective in promoting the involvement of community residents in Hakka cultural activities.

M190208

Effects of interactive animation on learning performance in a static equilibrium topic of university Physics for freshmen with different levels of prior knowledge

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Keywords: 5E learning cycle, interactive learning, animation, university Physics

Abstract:

As the mobile technology has advanced in recent years, the penetration rate of smart phones in college campus has reached one hundred percent. This study features a university Physics curriculum integrating the 5E learning cycle with the use of learners' smart phones. The purpose is to investigate the effects of interactive animation on learning performance in a static equilibrium topic of Physics class for freshmen with different levels of prior knowledge. A quasi-experiment design is employed. The participants are freshmen from one university in Taipei City of Taiwan, with an effective sample size of 104. A two-way MANOVA statistical analysis is administered to evaluate the learning performance. The results show that learners using their own smart phones to interact with the animation lectures outperform the other counter groups, based on the assistance of the in-time and constructive support.

M190209

**Request Help Module Interface Design on Speech-Generating Device and Augmented Reality
for Children with Autism Spectrum Disorder**

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Keywords: Autism Spectrum Disorder, Communication Disorders, Speech Generating Device, Augmented Reality (AR), Multiple Case Studies

Abstract:

The research has focusing on three participants with moderate autism children. Strengthening the effectiveness of request help and expression capabilities, using request help modules, taking out static key images, and Augmented Reality (AR) in combination with dynamic video clips situation in the Key Partial Video with Action (KPV). It provided development of request assistance training, expression in conjunction with the Auto Organizational Menu (AOM), multiple case studies and withdrawal designs, training response methods, and comparison of outcomes.

M190210

Social Network Analysis of Knowledge Construction in Computer-Supported Collaborative Learning

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Keywords: knowledge construction, computer-supported collaborative learning, social network analysis

Abstract:

Studying learners' knowledge construction process is the key to understand how learning occurs in computer supported collaborative learning (CSCL) settings. In this study, we selected the discussion interaction on topic of "scaffolding and CSCL" from the online course platform. Then we visually analyzed students' behavior of collaborative knowledge construction by social network analysis, and explored the social characteristics of different types of members in the network. The findings indicate that: 1)The students who didn't participate in the discussion of knowledge construction, are isolated points in the network, and are introverts in their lives; 2)The students with higher influence in the network are usually active individuals in the class. They actively speak in class and express their personal views. Most of them are class or school student cadres, and they are closely related in real life;3)Some personal characters, such as environment and social relationships, may have a certain impact on the process of collaborative knowledge construction. These findings will be helpful in designing activities of collaborative knowledge construction, and improving the effect of students' computer-supported collaborative learning.

M190212

The Influence of Building Construction Traceability System on Consumers' House Purchasing Decision

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Keywords: Building Construction Traceability System , Corporate Social Responsibility, sustainable operation

Abstract:

Because of the increasing incidents of natural disasters nowadays, causing houses to collapse, threatening people's lives and property. Part of the construction company began to incorporate the building construction resumes into its CSR report. Through the introduction of the production history system to give consumers to reduce the production process defects and more explicit protection.

Most of the existing research, few studies on the degree of acceptance of the consumer's experience in building construction resumes; The study is different in its exploration based on a questionnaire survey to find out the brand buildings, structural safety of residential buildings and the acceptance of building construction resumes among consumers in Taiwan.

Totally 231 valid questionnaires were collected and analyzed using SPSS to investigate the influence of each of the dimensions explored in this study on consumers' house purchasing decisions. The major analysis results are as follows:

1. The subjects generally tend to trust construction companies with more recognizable brands, believing those construction companies that value the quality of their projects will consequently have better images;
2. The subjects regard the safety of buildings as one of their priority concerns. It is probably because, with increasing incidents of natural disasters in recent years, consumers in Taiwan has gradually learned to take the structural safety of buildings seriously;

According to the findings of this study, most consumers attach importance to the concept of building construction resumes; Therefore, it is suggested that in order to build a safe and high-quality residential products, construction companies are suggested to develop deeper understanding of customer requirements and focus more on the quality of their construction projects in order to set up the standard operating procedures for construction, so as to help builders improve their own construction technology, so as to create the sustainable operation and the blue ocean business opportunities in the construction industry.

M190214

**Construction of internal quality assurance system for examination diagnosis and reform in
Higher Vocational Colleges**

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Keywords: Higher vocational colleges, Examination diagnosis and reform, Internal quality, Assurance system

Abstract:

In order to improve the satisfaction of stakeholders on the quality of personnel training, guide higher vocational colleges to fulfil the main responsibility of quality assurance of personnel training effectively. This research takes the examination diagnosis and reform work as the grasp, takes the school-based data platform construction as the support, through the establishment of the quality goal and the examination standard, forms different stratification plane of internal quality assurance mechanism of institute, consummates the quality management flow, forms the internal quality assurance system with strong early warning function and the stimulation function, achieving continuous and steady improvement in the quality of personnel training and internal management in institutions.

M190217

Comparison and Study of Sex Education of the Current Implementation Situation for Kindergarten in Fujian and Taiwan

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Keywords: Kindergarten sex education, Fujian and Taiwan, Comparison

Abstract:

As children learn walking and talking, they also begin to learn the structure of their bodies. People often think we are starting right away to talk about sexual intercourse with kindergartners. In this study, we used three kindergartens in Pingtung city, Taiwan and three kindergartens in Ningde city, China as the research objects, it means this researches would include the teachers of six kindergartens in the Fujian Province, China and Taiwan as objects. In order to confirm objectivity of comparisons kindergartens been chosen had the similar education standard and level, including two excellent public kindergartens and one excellent private kindergartens in Pingtung city and two Fujian Province model kindergartens and one high-ranking private kindergartens in Ningde city. The questionnaire study and interview methods were used the research processes, and constructing on the basis of deepening and practice investigations we would well compare the differences for the knowledge, the objectives, the content, and way of sex educations of the six kindergartens in Fujian Province and Taiwan. We had found that the kindergartens in Fujian Province had the problems of lack train of sex education and weak ability of sex education. Using the experience of Taiwan's kindergartens we could strength the train of sex education and teaching activities, perfect and improve the sex education objectives, contents, and methods. It is a good and important method to promote the sex education for the kindergartens in Fujian Province.

M190218

Empowering Engineering Students through LEGO Toolkit in Problem/Project Based Service-Learning Course: Enhancing Concentration, Critical Thinking, and Academic Achievement

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Keywords: LEGO toolkit, concentration, problem/project based, service-learning, academic achievement

Abstract:

This study investigates the influence of LEGO toolkit on enhancing concentration, critical thinking, and academic achievement of engineering students in Chinese Culture University. Two classes of students from the Department of Mechanical Engineering were recruited as research participants and divided into the experimental (N = 40) and control (N = 34) groups. The researchers adopted the motivational learning theory, where they attracted the students' attention at the beginning of the educational robot teaching practice and application class; the students were then given the same topic and asked to complete simple tasks. The level of difficulty of the tasks was gradually increased to help students learning robot. When the students successfully completed the tasks, their sense of accomplishment was further enhanced. A questionnaire survey was conducted on both the experimental and control groups one time before and after the class. The reliability analysis result 0.9 (Cronbach. α) indicated that the used questionnaire possessed satisfactory reliability, and the pretest and posttest results showed the students' significant difference in learning concentration before and after the class. In addition, students' participation situation in class was photographed. The interviews also revealed that the educational robot teaching practice and application class affected students' learning concentration, critical thinking, and academic achievement. Overall, the students in the experimental group showed a positive change in their academic achievement after attending the class.

M190219

Transforming the teaching laboratory into an inquiry laboratory for the future innovators

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Keywords: STEM Education, Inquiry, Practice, Competencies

Abstract:

The competencies of experimentation for science inquiry have been emphasized in all eras of education reform. For example, half-century ago, the PSSC Physics course included not only a textbook, but also specially designed laboratory experiments that were simple, easily assembled and inexpensive. Over the years, due to the industrialized mass production, the experimental instruments had become more standardized but less inquisitive, and required less hands-on operations. However, there is a worldwide trend to emphasize practice and inquiry now. The new science standards in our country had also initiated a new course named “Natural science inquiry and practice”. So, what do we have for the new course besides traditional experiments? And what kinds of new competencies we can pass on to the new generations to keep them competitive? We have developed a maker’s inquiry module to cope with instructors’ and students’ interdisciplinary needs for science inquiry. The brain of the new module is an open source microcontroller and the feelers can be various sensors, switches or motors. Teachers and students can work together in designing, constructing and improving the systems needed for their innovative inquiry projects. An example of reaction time inquiry will be presented. Due to the widespread usage of smartphones, the effects of distractions on reaction time have become an important and practical research subject. The stimulation and the reaction triggering systems can be realized based on the simple circuits learned in the science classes. Students can then send the trigger signals to the microcontroller, with proper programming, it will calculate the reaction time elapsed, and exhibit on the LCD display. The components of the new module may be reconfigured and reprogrammed for all other diverse inquiry projects. The newly developed module is not only an inquiry platform for the STEM education; it also equips students with the fundamental competencies such as designing, programming, signal and data processing, etc. for the modern technologies and future innovations.

M190220

Interdisciplinary Learning: a Case Study of Interactive Design

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Keywords: interdisciplinary learning, interactive design, crossed-subjects, design education

Abstract:

The present research is a case study of interdisciplinary learning for engaging students in the crossed-subject project of interactive design. Research subjects participating in this crossed-subject project were the university students with background knowledge in information technologies, graphic design and arts. Action research served as the main research approach for this study. Observation, interviews, and questionnaires were used for managing research data within this study. Findings show that interdisciplinary learning could be the useful approach to enhancing students' problem-solving abilities in the teaching and learning process of interactive design. Interactive design is possibly the course requiring the interdisciplinary collaboration between lectures and professionals from different fields.

M190222

Issue-Problem Based Board Game : Systemic Learning Environment for Water Resources Sustainability.

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Keywords: Issue-Problem Based Learning, SocioScientific Board Game, Systemic Learning Environment, Water Resources Sustainability

Abstract:

In recent years, the climate change has affected water resource (WR) severely. To face this problem in the future, the education of water resources sustainability (WRS) becomes more and more important. Therefore, we developed an issue-problem based board game: Water Ark which was constructed a systemic environment of WRS. The systemic environment contents the factors of cross-disciplinary issue, like the water footprint, the weather effects, the supply and the demand of water resource, the management of WR, the working of economic and society, and the human health. In the game, students are grouped to four teams. Each team plays the role of one of the four social organizations which related to WR, like government, agriculture, industry and public guild. The team which gets the highest performance is the winner.

The procedural rule and the reflected mechanism of the game are rigorous and systemic, coupled with a clear goal, what make Water Ark be a self-learning environment. First, students find and analyze problem when they notice the unstable environment of WR. Second, the game gives an open social interaction stimulating students to discuss and negotiate the operation mode of WR. Third, the choices of the circumstance between water consumption and economic development allow students to plan and implement the strategies of problem solving. Finally, the game feeds back the result of solutions, let students reflect about their strategies. Students carry out the procedural rules repeatedly what there is a new opportunity for them to correct and implement the solutions in each process.

To evaluate the effectiveness of Water Ark, a pretest-game treatment-posttest quasi-experimental design was adopted. The research data were collected from the assessment of WRS, the team performance in the game, and the questionnaire of personal reflection. Results indicated that after playing Water Ark, students appeared to have more learning achievement of WRS than they had been in pre-test. Also, they constructed the strategies of problem solving in the end of the game. In addition, they believed that they can migrate what they had learned in the game to their real life.

M190223

Using Board Game to Teach Socio-scientific Issues on Biological Conservation and Economic Development in Taiwan.

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Keywords: socio-scientific issue, Board game, biological conservation and economic development, Taiwan

Abstract:

This study uses the board game as a teaching material not only to develop students' decision-making ability and basic scientific literacy but also to foster their values of nature and social caring by dealing with the socio-scientific topics. The argumentation model serves as the main component in the design of this board game because argumentative dialogs are not common in conventional science learning but considered of importance for the reformed curricula. Evidence in the literature suggests that using a board game can strengthen students' interaction, communication, and negotiation, self-learning, and learning by playing. The board game structure contains four perspective systems: ecological, economic, cultural, and political. In the game processing, students have to handle, consider, understand the different role players' positions and facing different missions that involve socio-economic and environmental conflicts. Students, when making any decisions, will affect the follow-up game behaviors and develop tendency. In the game playing, the teacher acts as a host keeping the game rule. After the board game finished, the teacher will elicit students' reflections about what happened in the game.

This study has been field-tested with 38 high school students from two different high schools. Students played the board game lasting about 200 minutes (four classes). Students' scientific conceptions concerning biodiversity (closed-ended test) and perspectives on the socio-scientific issue (open-ended questions) were assessed before and after the board game lesson. Results show that students in both high schools significantly increase their biodiversity conceptions, with a high level of effect size (the Cohen's d equaling to 1.40 and 1.06 separately for two schools). A preliminary analysis of students' responses to open-ended questions regarding their perspectives of the views on biological conservation and economic development did not reveal a significant change. However, in the semi-structured interviews, the interviewed students were able to reflect on the values of animals and provide various opinions about animal conservation or economic development.

M190224

The Application of Design Thinking to Creative service design for tourist attractions: A Case study of the Design Workshop under the name "commission letter from the forest"

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Keywords: Design thinking, Service Design, Design workshop, APP, Alishan National Scenic Area

Abstract:

Alishan National Scenic Area has always been an internationally renowned national park. It's also one of the most important tourist attractions in Taiwan. However, according to the statistics of the tourists in the Alishan National Scenic Area, the number of tourists visiting the Alishan Forest Recreation Area has been declining year by year, starting from 2015. It is important to understand the reasons for the reduction of tourists, but it is more important to understand the gaps in services from the perspective of tourists and to provide creative service design. Since IDEO founder David Kelly officially brought design thinking into academic education, IDEO CEO Tim Brown also integrated design experience in 2008. He defines design thinking as a people-oriented design spirit and method. Design thinking must consider people's needs and behaviors, as well as the feasibility of technology or business. There are five steps in design thinking, including: Empathize, Define, Ideate, Prototype, Test. This design method has become a trend in the design field.

In order to promote the realization and experience of design thinking, this study introduces design thinking in design workshops that name "commission letter from the forest". Taking the Alishan Forest Recreation Area as the target, developing creative services for the service gap from the perspective of tourists. After careful event design and practical experience, 12 students from different professional fields have proposed two primary needs for service design, which is the service design of in-depth, multi-lingual travel APP and webpage. This method is indeed a transcendence. The results of this study can serve as the basis for follow-up research, and can provide a reference for those interested in related research.

M190227

Exploring interior design criteria for different atmospheric spaces

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Keywords: interior design, atmosphere, perception, design principle, element

Abstract:

Interior design style has always been a topic that cannot be avoided by the interior design profession. Since the 18th century, the interior design styles have mainly focused on the regional or contemporary artistic features, such as Mediterranean style, Baroque style and so on. With the intercommunication and integration of the global economy and culture, the decoration style of interior space in the world becomes more diverse, and it is often difficult to define the attributes of a space designing with a specific style. However, in different interior styles, there are many commonalities from the perspective of human experience perception. For example, people can experience or perceive the atmosphere of romance, cuteness and relaxation by the indoor decoration. Moreover, these perceptions from the spatial form are more direct to the users than the style representation, and they also affect the human emotion and consciousness in the space. This study is an exploratory research which mainly adopts the in-depth interview method. Professional designers are invited to describe the perception experience of various atmospheric features, such as romance, cuteness, and relaxation. After induction and analysis, the design principles of different atmospheric features are generalized. The results show that the basic design and combination principles of shapes, lines, colors, and texture used by designers differ in the creation of characteristic spaces of different atmosphere. It is suggested to collect data about clients' perception and experience of romantic, lovely, relaxed or other atmospheric features in the future to compare the similarities and differences between clients and professional designers in their perception of the atmosphere by indoor decoration. The creation of different virtual reality spaces may also be used to verify the design principles of different atmospheric characteristics through quantitative investigation, so as to find the possibility of establishing a new effective evaluation system for interior design field in the future.

M190228

The meaning of display education and cultural embodiments on local cultural museums: The case study of Hakka cultural museums in Yunlin and Chiayi, Taiwan

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Keywords: local culture center, display education, cultural embodiment, tangible cultural assets, intangible cultural assets

Abstract:

Recently, Taiwan has many local cultural centers are considered as museums in terms of the forms and functions. Those local cultural museums take on social responsibility in displaying the intangible assets of local arts or in the form of music, techniques, language, pictures, traditional festivals, folks. Those buildings of local cultural museums are financially subsidized by local government or central government, therefore the differences of financial support will influencing the building type of cultural museums. Therefore, some museums are using new constructed buildings, and some are repaired and reused public buildings from Japanese period. The size of space can affect the exhibiting works of tangible or intangible cultures. Thus study explores the meaning of display education. This study is aimed to understand how the culture to be presented through comparing the different space of museums, meaning of display education and cultural embodiment.

M190229

Empirical Study on Teaching Creativity in Engineering Education Using CSCL Scripts

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Keywords: Computer-Supported Collaborative Learning, Script, Teaching Creativity, Engineering Education

Abstract:

Creativity teaching is considered an important trend in the future of engineering education. In this paper we conduct experiments of teaching creativity by using the scripting technology in computer-supported collaborative learning (CSCL) environment. In CSCL, a script is used to describe clearly the set of rules about how to interact to each other for the team members when solving a problem.

Creativity is an evolution process, from lower-level to higher-level, expressive creativity, technical creativity, inventive creativity, innovative creativity, and emergent creativity. Creativity can be inspired and taught. We employ the creativity learning model which is divided into three phases, learning basic thinking methods, analogical thinking, and brainstorming, to teach and motivate creativity for engineering students.

We build our CSCL knowledge sharing environment based on the class-based collaborative-learning platform, CLASSTING, and then conduct experiments for teaching creativity. We follow the five steps in the e-Moderating model, we create CSCL scripts by integrating various teaching creativity methods according to the syllabus of the course outline. The scripts adopt methods of different learning strategies, from learning together, jigsaw, to co-op methods. Team members then carried out group discussions, information exchange and knowledge constructing on CLASSTING according to the rules specified in the scripts. To enhance the freedom of expressing opinions without caring about how others think, we adopt anonymity by hiding the identities of students during the course of group discussions.

The experimental results is summarized as below.

The process of knowledge construction is improved through integrating teaching creativity and anonymity in the CSCL scripts.

When designing scripts, teachers stand on an object view to guide students in thinking and inspiring them self-reflection.

The latter phases of script design can be adapted from the observations of the former learning activities.

By introducing the anonymity in CSCL activities, students are free to think and discuss without worrying about the prejudice and social pressure.

M190230

What Affects Middle School Students' English Anxiety in the EFL Context? Evidence from South Korea

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Keywords: English anxiety, English self-efficacy, Middle school students, SEM, Multiple group analysis

Abstract:

English anxiety is a common phenomenon in South Korea and parents often push their children to study in a coercive manner. When children are under pressure of their parents, they are more likely to lose confidence in their English ability which would increase the level of English anxiety. The ability of self-directed learning ability could be a major factor influencing self-efficacy on academic achievement. Therefore, this study attempts to verify a structural relationship how parent expectations and student self-directed learning abilities would affect English anxiety through English self-efficacy.

This study was designed to target South Korean middle school students. A total of 414 adolescents at age between 12 and 14 participated from 5 middle schools in four major cities via questionnaires. In case for statistical analysis, IBM SPSS Statistics 22 and AMOS 20 were used to perform T-test, correlation analysis structural equation modeling analysis, and multiple group analysis.

The main results were as follows. First, it was found that female students showed higher level of English anxiety and self-directed learning ability than male students. Second, adolescent's English anxiety negatively correlated with English self-efficacy and self-directed learning ability and positively correlated with parental pressure expectation. Third, the results of structural equation modeling analysis indicated that adolescent's English self-efficacy had partial mediating effect on the relationship between parental pressure expectation and English anxiety, and also had a full mediating effect on the relationship between self-directed learning ability and English anxiety. Fourth, the results of multiple group analysis indicated that gender difference in paths of models was significant. In specific, male students' English anxiety was more susceptible to parental pressure expectation than female students, whereas female students' English anxiety was more sensitive to English self-efficacy. This suggests effective support practices for adolescents who learn English in EFL environments to lower their English anxiety.

M190232

Study on the Attractiveness factors of Online Course

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Keywords: Online Course, Miryoku Engineering, Evaluation Grid Method, Quantification Theory Type I

Abstract:

With the rapid development of online courses, digital learning has become a global trend. In this context, this study analyzed the high intake population of online courses for online affective cognition, to explore what the user's attraction factors for online courses are. Finally, find out the key factors that affect consumers' usage of online courses and the weights of impact relations respectively. Provide guidance for future improvement of online courses.

This study will be conducted through the evaluation grid method of Miryoku engineering, by interviewing 10 high-intake users, five males and five females, to capture the charm factor of online teaching. In order to make the charm factors more accurate and representative, this study will summarize the charm elements by using KJ (Kawakita Jiro Method) and then quantify the factors in the form of a questionnaire. Through the statistical analysis of the questionnaire and the quantification theory Type I, the correlation between the charm feeling and the online course, and the weight of each item (original evaluation item) and category (specific evaluation item) were calculated.

Through the research and discussion on the charm factors of online teaching, the results analyzed and integrated into this paper could give more substantive suggestions and help to the education industry.

M190233

On the Construction of Philosophy System of Learning

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Keywords: Learning, Philosophy System, Construction

Abstract:

Learning is not only an individual experience activity, but also a common practice activity with some regularity in today's society, and it is the basic motivation to continuously promote the development and progress of human society. The cognition of the regularity of learning is deepening with the development of the times and social progress. Under the condition that learning has become a ladder to promote social progress and lifelong learning has become a consensus, especially under the condition that artificial intelligence has ever influenced human behavior, questioning the nature and regularity of learning and exploring the construction of a philosophy system of learning will be conducive to promoting lifelong learning and forming a positive force to promote social development, with typical ethical significance. This article will discuss from three aspects: why the philosophical system of learning is needed, why it can be constructed and how it can be constructed.

M190234

Mother's aim of providing English education to young child and child's interest in English: the mediating effect of interaction at home using English

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Keywords: Aim of English Education, Young Children, English Interaction at Home, Interest in English

Abstract:

The purpose of this study was to investigate the influence of parental variables on young Korean children's interest in English. Two-hundred-eighty-nine Korean mothers of 3-to-5-year-olds reported their aims of providing English education to children and amount of English interaction with them at home. The degree of child's interest in English was measured not only with mother ratings but also with an additional teacher ratings to account for the child's behavior towards English at home and classroom environment. To investigate the relationship between the variables, frequency analysis, correlation analysis, and multiple regression analysis were conducted. The main results are as follows. When parent's education level, household income, and parent's English proficiency were controlled, the 'openness to other languages and cultures', one of the mother's goals of providing English education during early childhood, had a positive impact on child's interest in English. Meanwhile, 'the acquisition of language skills for success,' another one of mother's aims of providing English education, did not significantly predict their child's interest in English. Furthermore, the amount of interaction at home in English had a positive impact on child's interest in English. Finally, there was a mediating effect of the amount of English interaction with children at home on the relationship between 'openness to other languages and cultures', one of mother's goals of providing English education, and child's interest in English. Results suggest that in order to promote young children's interest in English, the purpose of English education should be geared towards embracing cultural diversity rather than setting language acquisition as a precondition for achieving later success. Simple interactions between young children and their family members in English can also help to cultivate children's interest in English. This study is meaningful in that it provides suggestions on how parents influence young children's interest in English when they learn English as a foreign language.

M190235

Chicken or egg? Relationship between four-year-old's phonological awareness, reading ability, and writing ability

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Keywords: phonological awareness, reading ability, writing ability

Abstract:

The purpose of this study was to explore the associations between four-year-old children's phonological awareness, reading ability, and writing ability. Subjects include 145 (65 boys, 80 girls) four-year-old children from 17 different kindergartens located in 9 cities across South Korea. Children's phonological awareness, reading and writing ability were assessed with different measurements. To investigate the relationship between the variables, frequency analysis and correlational analysis were performed. The findings revealed several conclusions. First, a positive correlation across the three variables was well established especially with reading ability showing the highest correlation with writing ability. Second, bidirectional reciprocal causation model showed statistically significant pathways from reading ability to phonological awareness, writing ability to phonological awareness, and writing ability to reading ability. Third, feedback loops existed in the connections between phonological awareness, reading ability, and writing ability. To demonstrate, phonological awareness → reading ability → writing ability → phonological awareness and phonological awareness → writing ability → reading ability → phonological awareness pathways were significant. Collectively, the cyclical relationship among the three variables suggest the ongoing process in which phonological awareness, reading and writing ability mutually interact with one another. Development in all three areas should be equally encouraged for young children. Further implications and suggestions are discussed.

M190236

Developing a communication decision-making model for continuous improvement of teaching quality

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Keywords: Higher education, Personality traits, Decision-making, Conflict

Abstract:

Abstract

Purpose – Proposal of continuous improvement policy in teaching quality is easy to be rejected when a manager of higher education institution meet a teacher who has different personality traits. Based on above, the purpose of this study is to develop a communication decision-making model to decrease the conflict with teacher of different personality traits.

Design/methodology/approach – Based on personality traits and communication techniques, this study develops a decision-making model, and adopt the multiple criteria decision analysis (MCDA) to analyses.

Findings – According to the test results, we developed a communication decision-making model. With the model, manager of higher education institution can decide and select a fit communication technique when face teacher who has different personality traits.

Practical implication - Our research results have great practical implications. Actually, the conflict is existing between manager of higher education institution and teachers. The mainly reason is the manager is difficult to understand how communicate with teacher as different personality traits. Thus, although manager put forward a great proposal of continuous improvement in teaching quality, due to wrong communication behaviour, it is easy to be rejected by teachers. For this reason, our research results will help manager of higher education institution to understand how communicate with teacher who has different personality traits.

Originality/value - Our research offers valuable communication decision-making model regarding how to communicate with teacher as different personality traits.

M190237

Teaching strategies development for environmental sustainability consciousness: based on different personality traits of students

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Keywords: Higher education, Environmental sustainability education, Personality traits, Teaching strategies

Abstract:

The aim of this study is to identify combinations of different personality traits among students and explore for which combinations students should use which teaching strategies to improve their environmental sustainability consciousness. In addition, this study also identifies different mediation factors, and further explore which mediation factors have a positive effect to improve which teaching strategies. In this study, two-stage cluster analysis and partial least squares are the methods for identifying different combinations of personality traits and test mediation. This study uses 500 samples for analysis. From the test results, this study first identifies several combinations of personality traits. Next, further develop teaching strategies and test which strategies are suitable to which combinations. Finally, try to identify which mediation factors have an effect to enhance for different teaching strategy, and ensure the environmental sustainability consciousness.

M190239

Data Preprocessing of Fuzzy Rule-Based Classification System for Early Warning of Student Learning

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Keywords: Moodle, learning warning prediction, preprocessing, fuzzy rule-based classification system

Abstract:

In today's higher education in the world, most of universities use digital learning systems for teaching, so that learning activities of students can be logged completely for the whole semester. This study mainly uses log data to predict and analyze student learning performance. However, the quality of the data and the selection of key data fields determine the accuracy of machine learning. In order to accurately predict the learning outcomes of students, this study employs the Normal, Normal distribution, and Z score methods to organize the data in the preprocessing stage. Then, the student behavior log data from the previous period of the semester is used to established a learning model by using the Fuzzy Rule-Based Classification System (FRBCS) algorithm. It is expected to improve the student's prediction rate. The study illustrates that the prediction accuracy of the Normal distribution method will be higher than the other two methods.

M190241

Integration of Self-regulation Learning and Online Participation Learning Strategies for Improvement of Distance Learning Effectiveness

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Keywords: Distance Learning Effectiveness, Self-regulation Learning, Online Participation Learning

Abstract:

Autonomy and interaction facilitate making progress towards study effectiveness of distance learning. The well-established educational strategies, self-regulation learning and online learner participation, can be respectively introduced to address the issues. The benefits, however, cannot be significantly gained since none of them satisfactorily achieves both autonomy and interaction. In this paper, self-regulation learning and online learner participation strategies are combined together within a learning management system (LMS). The experiment is performed in a private institute of technology and its teaching course focuses on English language which is a fundamental and essential course in Taiwanese educational system. The results shows that the learners in the experimental group obtain better outcome and effectiveness in the distance learning environment.

M190242

**The Relationships among Children's Ego Strength, Stress Coping Style, Performance Anxiety,
and School Class Adjustment according to Gender**

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Keywords: School Class Adjustment, Ego Strength, Stress Coping Style, Performance Anxiety

Abstract:

The purpose of this study was to identify the relationships among ego strength, stress coping style, performance anxiety, and school class adjustment according to gender in elementary school 5th and 6th graders (298 boys, 265 girls). The subjects of this study were 563 elementary school children in South Korea. The results showed that stress coping style and performance anxiety multiple mediated the relationship between ego strength and school class adjustment. There were also significant differences were confirmed by gender. Finally, the implications of the research results are suggested.

M190243

Analysis of the Development of College Students' Innovation Training Projects in the Building Information Related Fields under the Educational Policy of Promoting Innovation and Entrepreneurship in China

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Keywords: Building Information Modeling, Innovation and Entrepreneurship Policy, College Students' Innovation Training Projects, China

Abstract:

The government plays an important role in promoting college students' innovation and entrepreneurship education. A good environment for innovation and entrepreneurship training, in addition to being able to develop the innovative and creative abilities of college students, can train students to have more and more comprehensive training, and can generate new technologies or produce new business model will ultimately inject and drive the society into an environment of innovation and entrepreneurship. At this stage, China's construction market and output value have become the world's leading countries. However, the past engineering talent training model is mostly a technical-oriented talent training process. The relevant policies and development approaches have been formulated, and the reform of the training model for innovation and entrepreneurship education of construction engineering talents is also an important issue.

In view of this, the purpose of this study is to discuss the relationship between the innovation and entrepreneurship education and the development policy of the construction industry in the government policy and to explore and understand the relationship through the analysis of the project of university innovation and entrepreneurship education. The research contents include 1. Collecting the main policies and contents of the Chinese education authorities (Ministry of Education) for university innovation and entrepreneurship education; 2. Collecting the building information policy development planned by the Ministry of Construction (Ministry of Housing and Urban-Rural Development) 2016- 2020 j Development outline guide, as a classification basis for analyzing college students' innovation and entrepreneurship projects; 3. The innovative and entrepreneurial projects funded by the Ministry of Education of China in 2016-2017 are the main body, and the related topics in the field of building information are retrieved, and classified and analyzed; Finally, the college students' innovative training programs are analyzed, and the current situation and development of the implementation are discussed.

M190244

A Study on Tacit Knowledge and Design Education in High Vocational Colleges

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Keywords: tacit knowledge, apprenticeship, situational teaching, analogical reasoning

Abstract:

This study explores the art and design education mode in high vocational colleges within the theoretical framework of tacit knowledge. I propose that by understanding the tacit knowledge theory and principles behind the acquisition of art and design education as a cumulative developmental, the art and design expertise can be greatly enhanced by the introduction of three educational modes: First, apprenticeship mode which advocates students to learn from masters, seniors and peers; Second, situational teaching which utilizes trial or simulation of design sites; Third, analogical reasoning which infers from art and design examples.

M190246

The Review and New Progress in China's Urban Geography in Recent Ten Years

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Keywords: China, literature review, Urban geography

Abstract:

Urban geography has developed rapidly in China since the 1980s, and achieved a lot of important results and significant theoretical methods in the research of critical problems, such as urban development and urbanization. Urbanization in China has presenting uniqueness, resulting in some unique theories in the fields of urbanization, suburb dynamic mechanism, studies on the metropolitan ranges and urban system. This paper has collected the papers of urban geography from 9 major academic geographic journals, covering recent 10 years. The research of urban geography in China, mainly concentrated on three aspects including urbanization, urban system and urban spatial structure. There are some findings as follows: firstly, the research on some fields, such as urbanization, urban scale system, urban function has decreased relatively. Secondly, the research on spatial structure of urban system is an important theme, meeting the demands of China's urban development. Thirdly, on the research of urban space, there are big changes turning from urban material space to urban social space. Fourthly, urban life quality is also an important focus. The last, globalization has been regarded as an important force driving urban development and the changes of urban space. On the whole, urban geographers have keeping on working for the development of urban economic society in China. At the same time they also pay more and more attention to western urban geography and try to dialog with the world.

M190247

Investigation of BIM and GIS Information Exchange Standards for Urban Utility Tunnel Construction

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Keywords: Urban Utility Tunnel, BIM, GIS, Interoperability

Abstract:

The planning and construction of urban utility tunnel symbolize the important indicators of urban overall upgrading and modernization. The overall construction of urban utility tunnel will further develop towards digital construction and smart urban utility tunnel operation system in order to maximize public benefits. With the maturity of BIM technology in construction projects, other projects such as roads, subways, bridges, integrated urban utility tunnel, and other municipal projects have gradually prospered to introduce the application of BIM technology. The urban utility tunnel project discussed in this paper is different from the characteristics of the fixed location and the volume of the general single building. It can be known that the integrated pipe gallery itself is composed of building structures and has continuous linear spatial distribution characteristics. Therefore, it is also consistent with the application of building information model BIM and GIS in layer expression and presentation. Therefore, if the built-in urban utility tunnel BIM mode can be used as the underlying data of the current GIS operation and maintenance management platform, including the geometric attributes, data resources, material attributes, operation and maintenance requirements and attributes of the model, it can be directly used in CityGML. The format will reduce the investment of a large amount of manpower in the construction of the GIS model. Although each BIM and GIS technology has corresponding functional features, it is still unable to serialize and convert the format and data. The generated IFC format is used for the comparison and application of the CityGML grid test in GIS and it is known that there is still a problem of information asymmetry and omission. This paper takes the IFC (Industry Foundation Classes) and CityGML (City Geography Markup Language), which are common in BIM and 3D GIS, as the main language objects of analysis, and discusses the interactivity and operational technology architecture of BIM-IFC and GIS-CityGML. Finally, relying on a practical case for application and discussion.

M190249

Inventor firms, value trajectories and sustainable development of regions

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Keywords: GPN2.0, firm-level value capture trajectory, strategic coupling modes

Abstract:

this article addresses GPN2.0 in economic geography. GPN 2.0 aims to analyze firm-level value capture trajectories from the vertical (organizational-) and horizontal (spatial-) dimensions in order to examining the coupling modes in different regions. 62 Korean-invested firms sourcing from automotive industry in Jiangsu province are selected to make empirical research on firm-level value capture trajectories using the GPN2.0 analysis framework. And we make some comparison on coupling modes between North Jiangsu and South Jiangsu. There are some findings as follows: (1) North Jiangsu is in the stage of ‘structural coupling’. That the GPN of KIA Motor touched down in ground has shaped an automobile industry cluster in Yancheng, Jiangsu Province. Facing the uncertainty of the local investment environment, most of 22 firms in North Jiangsu pursued for profits by inter-firm control in the GPN dominated by KIA Motor rather than building closed connection with local firms. Meanwhile, for them bargaining with local government is also an important way to get profits from the local. (2) South Jiangsu is in the stage of ‘functional coupling’. 40 firms in South Jiangsu are captured by multi-sourcing GPNs (both Korean motor and Non-Korean motor) outside the region. In order to cope with the tightening of local industrial policies, many firms in South Jiangsu choose to cooperate with local domestic firms to reduce costs. Local domestic firms are also actively establishing connections with external global production networks. Different regions should make some preparations for the higher-level strategic couplings to meet new demands in the future.

M190250

The Integration of Humanities and Technology for Interactive Learning

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Keywords: interactive learning, visual programming language, e-storybooks, cultural immersion

Abstract:

Tamsui District in Taiwan is a historical region. There are many ancient cultural monuments, such as Fort San Domingo, Hobe MacKay Hospital, Hobe Fort, Tamsui Customs Officer's Residence, Oxford College and so on. Hence, in this paper, we design two e-storybooks for children by integrating of Tamsui humanities and computer technology. The two e-storybooks are built by a visual programming language, which its environment is media-rich. Children can interact with the characters in the story while reading the e-book. This way for informal learn not only is interesting, but also achieves the purpose of cultural immersion.

M190251

The study of Cross media Design and Experience Model of Sugar Industry Development in Taiwan

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Keywords: Taiwan sugar Industry, Image animation, Cross Media, Emotional experience

Abstract:

The development of sugar industry in Taiwan has been more than a hundred years since 1900, leaving a rich cultural and historical story and economic income for Taiwan. In recent years, the rise of cultural preservation and cultural rejuvenation of the wave. Silence nearly 20 years of sugar has once again been taken seriously. For the history and context of the history of human history, the evolution of equipment and environmental changes, would like to use the design of scientific techniques and methods preserved, so that this generation of young people from the ancient view of this. Through the cross-media platform, experience the way to understand the history of sugar, humanities and the story of the times.

The study plan for the two steps, the first step will be text analysis, investigation and interviews. Through the photo, interviews established the contents of story as picture, animation and drawing to show the history of humanities and equipment. With Web App as the architecture, O2O mode (Online To Offline) to each other to photos, video, picture animation, etc. to tell the story, so that users can understand the feelings of Taiwan's sugar industry in history.

The second step of the program, in the actual field space experience, to active, passive (QRcode) hardware and software devices, media messaging, in a time-series presentation of the five themes: Sugar Historical changes, popular science knowledge, old and new sugar production process, production equipment and sugar cane transportation, through the media interactive way to experience learning.

This study will use the image media content built in the first year to create a new emotional perception and experience through a cross-media integrated web-based mobile platform, designed in a perceptual way. In addition to the integration of hardware and software, and the development of a set of experience for the Sugar Park, for follow-up experts and research scholars for reference.

M190252

Supplier Selection, Buyer Ability and Service Outsourcing Performance

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Keywords: Service Procurement, Outsourcing Performance, Professional competence

Abstract:

Due to the rapid growth of service economy, the market has perpetually walked on the path of Professional Service. Service purchasing had become a vital and necessary topic that companies need to face with. Through supplier's professional competence, buyer companies could lower the cost and obtain the competitive advantage. According to Agency Theory, there is a risk of information asymmetry that exists between the buyers and the service suppliers. The study is based on the signal theory and the resource-based view. It has had the professional competence and corporate reputation as the signal for the suppliers, and has had professional and productive knowledge as a buyer's ability to discern. We use the restaurant and hospitality industry as samples by questionnaires, and sent out totally 252 questionnaires, and finally collected 207 valid samples. The findings in this study show that professional competence and corporate reputation impact positive on performance, and buyer's industry-knowledge and product-knowledge have moderating effects to these relationships. Through professional competence and corporate reputation as index that buyers can predict the service outsourcing performance which can be an important target easily. Also, buyer firm can improve the industry-knowledge and product-knowledge to select service supplier for superior outsourcing performance.

M190253

The development of senior high school teachers' community in response to the Twelve-Year Compulsory Education

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Keywords: Twelve-Year Compulsory Education, Teachers' Learning Community, Courses Development, Homogeneous, High-Quality

Abstract:

The objective of this research is in response to the execution of Twelve-Year Compulsory Education and the feasibility of developing a senior high school teachers' learning community as well as school-based special courses in order to implement the improvement of quality and homogeneous of schools. This research will use the techniques in analyzing literatures and interviewing senior high school teachers to understand the feasibility of creating senior high school teachers' learning community which includes: transformation of mental models, operation of team learning mechanism, establish the community's goal, develop the possible self-edit teaching materials. Which will improve teachers' professional standards and their professional images. In addition, this research will help in suggesting the ways to develop teachers' professional evaluation, resolve the problems caused by the change in course planning process in senior high school.

M190254

Impact Assessment of Natural Education Center on Forestry Policy Driven via New Media

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Keywords: Natural Education Center, New Media, Forestry policy

Abstract:

The nature education center uses the Documentary Analysis to analyze the forestry policy via new media. The analysis contains the Facebook fan page and the blog analysis. The center for natural education is subordinate to the forestry bureau. In addition to the policy issued by the forestry bureau, it must follow the service capability, service approach and service efficiency of the service efficiency system, in addition to the policy issued by the forestry bureau, in order to ensure that the influence of the Natural Education Center in the development of environmental education and forestry can be simultaneously taken into account. Resource management, tourist management and service management.

M190255

The Effect of Teaching Models on Improvement of Student Employability

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Keywords: pedagogy for employability, problem-based teaching model, absorptive capacity, student employability

Abstract:

In recent years, students learning outcomes have become the main focus of higher education institutions (HEIs). Many HEIs are committed to improving teaching methods, learning environment and learning incentives, and therefore increasing students' motivation in learning and their learning outcomes. In the pursuit of learning, higher education institutions should also focus on student employability and enhance the student learning outcomes. The positive relationship between student learning outcomes and student employability has been well clarified. Of all the students graduated from the HEIs, those who find jobs they are best suited to and demonstrate high performance in workplace will attribute their success to the well-rounded training provided by HEIs, leaving the HEIs better reputation. Therefore, this study investigates the cultivation and improvement of employability, combined with the teacher's teaching level and students' self-learning ability, to understand the variables presented in student employability.

M190256

Perceptions of University Faculties in Taiwan towards Institutional Performance

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Keywords: social capital, institutional resource, higher education, institutional performance

Abstract:

As the major concerns of higher-education institutions are teaching, service, and research, this paper describes a nationwide evaluation of institutional performance in relation to management of universities in Taiwan. The evaluation was based on the perceptions of university professors regarding institutional performance, institutional slack, and reputation, as well as internal and external social capital. The study seeks answers to several research questions, and adopts a survey approach. After choosing 30 universities of various sizes and from different geographical regions, 926 professors were selected randomly as participants. Using structural equation modeling, the authors test the influence of institutional slack, reputation, and internal and external social capital on performance. The results show that all relationships among the variables are statistically significant and positive, while significant mean differences were found between at least two groups. The implications for higher education stakeholders and administrators are discussed.

M190257

The Study of Truism and Social Education of Cultural Museum of Alishan Tsou People Laiji Tribe

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Keywords: social education, Tsou People, Laiji Tribe, Cultural Museum

Abstract:

The study takes the Cultural Museum of Alishan Tsou People Laiji Tribe as the subject to discuss the promotion of local social education tourism. Through the planning and design of Laiji Cultural Museum, it is expected to inspire the care and interests of tourists to local history and culture, enhance the understanding and mutual action among local tribes, pass the cultural recreation and information via Cultural Museum as to achieve the goal of educational promotion and tourism restoration.

Aiming at the social education and tourism promotion through “Cultural Museum of Alishan Tsou People Laiji Tribe”, the major study is divided into three phases as follows:

First phase: “literature study”, “depth interview” and case study to constitute cultural museum by “regional”, “historical”, “exhibition” and “educational” such tourism and social education meanings.

Second phase: “design and operation” phase, establish preliminary exploration and study through the theory of design to acquire design related ideas and thoughts. Carry out the classification of food, clothing, living and transportation of Laiji Tribe “Tsou Culture”, “Building Features”, “Clothing Elements”, “Living Devices”, “Life Hunting”, “Animal Bones Collection” in the future to the space design of cultural museum, creating the space arrangement and design of cultural museum in spirit of Tsou People.

Third phase: “design drawing and model production” phase: plane, 3D, profile, perspective drawing and model production, and respond the effect of preceding theories to design theories as well as reflect the theoretical structure previously established to complete the design.

The planning and design of Cultural Museum of Alishan Tsou People Laiji Tribe includes the dialog built altogether by cultural relic and visitors through the idea of regional operation. The implements exhibited in

the cultural museum and history materials, local consciousness and community spirit will be adopted in the design to communicate with tourists and achieve the purposes of cultural promotion and social education.

M190260

Using Service Contextual Inquiry to Investigate the Demand of An Indoor Gardening Treatment to Improve the Attention of the Elderly with Dementia

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Keywords: Dementia elderly, Attention Improvement, Horticulture therapy, Contextual Inquiry, Indoor Gardening Table Game for Dementia Elderly

Abstract:

This study is to understand the cognitive impairment needs of elderly people with dementia and propose design targets for indoor plantation game to improve the cognitive of attention in dementia. The Contextual Inquiry methods were adopted to collect behavioral problems of elders in a private elderly care center, when engaged in indoor horticulture therapy activities and interviewed caregivers. Finally, the Affinity Diagram was used to sort out the service opportunities. The requirements consist of the following points: 1. Organize horticultural treatment activities indoors, 2. Add nostalgia elements, 3. Improve concentration and selective attention, 4. Accompanied acquaintances, 5. Intuitive design, 6. Use of sitting position, 7. Consideration of environmental issue. In accordance with the above requirements, an indoor gardening table game was to construct. After six attention flower assembling tasks twice a week for three weeks, the attention score of the latter MMSE test was twice as high as that of the former. The subjects not only improved the score of the attention, but also the social ability and communication ability were progress.

M190261

A model for evaluation of Innovative universities

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Keywords: innovation management, educational innovation, innovative university, measuring innovation

Abstract:

The research aims at building a model for evaluation of universities for their innovativeness. The model is based on a wide range of educational innovations, which have been selected after a literature review and a broad analysis amongst university websites. The shortlisted types of educational innovations form a model for university management when it comes to innovations and especially for delivering educational innovations. The model itself may be used for both management approach and for evaluation of the diversity of using educational innovations for improving education, processes, management, teaching, learning, etc. After presenting the model, a comprehensive comparison analysis is made in order to outline the benefits of the proposed approach for measuring innovativeness of universities over the existing models and indices for evaluation of innovation in universities.

The research project aims at identifying and assessing the importance and dimensions of educational innovations developed and applied in universities and higher education as a major factor for enhancing their competitiveness. The analyzed educational innovations covers broad types as:

- Innovations in teaching
- Innovation in the administration of universities
- Technological innovations in training
- Innovations to achieve more effective learning / learning
- Innovations to stimulate science in universities
- Process of innovation in universities and process modification
- Innovation training and education
- Educational innovations to stimulate the development and development of innovation
- Robotic and automation of processes in education and higher education
- Innovation related to gaming
- Social Innovation in Higher Education Institutions
- Pedagogical innovations
- Online-based innovations

The audience of the study's results are university society and innovation management experts in universities, scientific organizations and training area.

M190262

A Care Management and Guidance Security System for Assisting Demented Patients

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Keywords: Spatial cognitive impairment, Care management, Guidance Security, Wayfinding for dementia, Service Experience Engineer

Abstract:

With the aging of the population, the rate of people with dementia is rapidly increasing. The care of dementia patients is the biggest problem for caregivers and family members. Whether it is at home or institutional care, patients have problems with space and environmental cognition. It often leading to an abnormal behavior, such as road recognition problem, wandering, or even getting lost. This study uses contextual inquiry to identify potential missing and demand points in conservation agencies: (1) Landmark settings; (2) User-centered guidance services; (3) Item configuration adjustments on the moving path; (4) Monitoring of patient movements (5) Interface interaction mode of text, voice and image; (6) Service that does not affect the patient's mobility, combined with Internet of Things technology. The Care Management and Guidance Security System (CMGSS) consists of the following subsystems: (1) indoor guidance system; (2) Guiding landmark and interactive system; and (3) monitoring system. Although the device has been designed for institutional care, it can also be applied to the management and care of general home-based demented patients.

M190263

An Industrial Design Practice Application Assisted Design Teaching

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Keywords: Industrial Design Practice Teaching, Service Contextual Inquiry, Smart Mobile Application Assisting Teaching

Abstract:

This study aims to improve the learning outcomes of students in industrial design practice. Using service experience inquiry, this research discusses the lack and hidden demand of student in industrial design practice courses. Six service potential demands are described as follows. (1) TA actively caring students, (2) Recording class discussion, (3) Teaching environment improving (4) Offering a discussing platform for teachers and students, (5) Clear design specifications and scoring standards, (6) Product design progress management. Based on the above issues, an Industrial Design Practice (IDP) is designed for mobile devices with a combination of consultation interacting teaching features to improve students' effectiveness learning in design practical courses.

M190264

Analysis on the development of Art Design Education in Northwest China

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Keywords: ethnic minorities, regional characteristics, Practical teaching system, suitable

Abstract:

With the development of national economy and education, Northwest China is under continuous development, which is the gathering place of ethnic minorities. The region is of special regional characteristics and cultural background, and art design education there is quite different from that in developed regions. In the face of the prosperity of art design education at present, this paper analyzes the existing problems of art design education in Northwest China. In consideration of design, national culture and the goal of talents cultivation, this paper analyzes the construction of scientific and reasonable practical teaching system which is suitable for Northwest China and the development of art design education which is suitable for colleges and universities in Northwest China.

M190265

The Effects of Instant Feedback System on Course Interest and Academic Achievement in Gamification Learning

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Keywords: Gamification Learning, Instant Feedback System, Academic Achievement, Course Interest

Abstract:

The research was carried out to examine the impact of the feedback system on participants' interest and academic achievement in the gamification learning. Gamification learning experiments were conducted for two classes of students (90 participants in total) throughout a semester, and multiple feedback time intervals were used to test participants' interest and academic achievements during this process. It turns out that more instant feedbacks lead to better achievements. Instant feedbacks act as promotions for learners' thinking of problem-solving. Meanwhile, feedbacks help the learners avoid being interfered by other irrelevant content, which helps them build on their interest in the learning contents more easily. The experiment reveals that the instant feedback system helps increase learners' course interest and academic achievement.

M190266

Dance Education for Adolescents with Eating Disorders

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Keywords: Dance education, Therapy for Adolescent, Eating disorder, Clinical application, Alexian Brothers Behavioral Health Hospital

Abstract:

In recent years, the incidence of dietary disorders among teenagers is increasing gradually. Anorexia nervosa and overeating disease have become a social concern, among which anorexia nervosa is one of the most fatal mental diseases. Alexian Brothers Behavioral Health Hospital of AMITA Health system behavior Health Hospital of America applied the intervention of dance therapy to the clinical treatment of adolescent dietetic disorder. This article introduces the clinical application of dance therapy in American behavioral hospitals through the diagnosis of patients' somatic movements, the establishment of dance intervention targets and the application of intervention measures. Expand our understanding of the most advanced model of dance therapy in behavioral cognitive psychology of America. Clinical studies indicate that dance therapy has a significant effect on adolescent dietetic disorder patients and has a positive intervention effect on self-acceptance, physical and mental unity, emotional regulation ability and healthy behavior pattern.

M190268

A Smart Caring System Designed for Household Emotional Interactions for Elderly and Family Member

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Keywords: Service Experience Engineering, Home Caring Devices for Ederly, Emotional Interactions between Elderly and Family Members, IOT

Abstract:

In this study we implement service-experience engineering (SEE) framework to analyze the home-based behavior of interaction between elderly with family member, and identify hidden needs for strengthening inter-generational relationships and harmony as a turning point for new product innovations in home-based interactive devices. Based on the hidden demands, a smart caring system with chair is designed for improving emotional interactions between elderly and family members. The Smart Caring Interactive System (SCIS) include three sub-systems: Smart sensing system, Signal analysis system, and Emotional interaction system. After experiencing the SCIS products, the results show an obvious aid in emotional support and family communication.

M190269

Learning performance improving on entrepreneurship training of higher education

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Keywords: Higher education, Personality traits, Mediation factor

Abstract:

The aim of this study is to identify affecting factors when improving the entrepreneurship training of higher education. Actually, different personality traits among students are always existing. Consider different learning responding may cause performance variations. Therefore, develop an effective entrepreneurship training program to guide students of different personality traits for studying entrepreneurship, that has become a priority work on entrepreneurship education. For this reason, we should consider different students who have different personality traits. Existing studies have provided a more valuable training program. Even though, it is hard to ensure the learning performance of different personality traits students will achieve a higher positive performance. Based on the above, this study will identify different mediation factors, and further, explore which mediation factors have a positive effect to improve learning performance on entrepreneurship education of higher education. In this study, PLS is the methods for exploring and testing mediation. This study uses 500 samples for analysis. From the test results, this study first identifies an entrepreneurship training process. Next, further develop mediation factors and test which factors affect the training process and improve indirectly performance. Finally, give a conclusion.

M190271

Analysis on the Development of Characteristic Education of College Students Majoring in Environment Arts in Northwest Minority Areas

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Keywords: living habits, regional culture, continue, teaching purposes

Abstract:

Ethnic minorities have different cultural backgrounds. With the development of society, they gradually narrow the gap, but ethnic minorities still maintain different living habits and special living environment, facing the special geographical environment and inner needs of ethnic minority areas. At present, the traditional environmental education system is still maintained in college education. Students need to face the market designed by special living environment after employment. This requires colleges and universities to find educational methods suitable for minority markets in environmental art design education. Good service to special market needs. The environmental design is for people. The professional training target has the difference between the original basic professional education and the special attributes of ethnic minority areas. The formulation of professional training programs cannot unilaterally increase the knowledge of regional ethnic culture in the northwest region, but should start from basic education. To strengthen students' ability to analyze the region and culture, and at the same time set up corresponding teaching links to achieve their teaching purposes, so as to cultivate professional design talents that can continue the regional cultural characteristics of the Northwest minority areas.

M190273

Respect nature, learn from tradition ——Village of Xiapu Daping Renovation and Protection

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Keywords: village renewal design tradition

Abstract:

In response to the updated design of the village, the author should raise and discuss the issues that the designer should pay attention to, including: who is the main body of the village renewal design, the ecological design, the respect for local life and culture, and the learning of folk traditions and craftsmen.

M190274

The design of Chinese traditional garden under influence of FengShui——The apply in yongding Hakka soil building high north scenic design and planning projects.

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Keywords: KEY WORDS:Classical Chinese Gardens, FengShui, Design, Application.

Abstract:

Fengshui, originally a folk cultural criterion for decisions on traditional architecture sites, is the prototype of ancient geography as well as traditional environmental science, which was inherited from a variety of experience. Its theory was largely treated as a rulebook in the process of designing classical Chinese gardens. Research into how fengshui has affected the format of primary elements in classical gardens, is not only an effective way to explore the structural format in classical gardens, but can also be used as a reference in the design of modern gardens. Exploring the theory of fengshui in classical gardens is one of the most important keys in the study of their culture, which is the perception and realization of traditional gardens in terms of spiritual aspect. Feng shui theory is applied in the classical gardens in the Yongding Hakka Earth Building High North, scenic design and planning projects through the use of these feng shui theory, summed up the strengths and weaknesses in project design and planning for the effect of landscape environment, for the design provide experience.

M190276

Practice research into the design education inspirations and teaching patterns of design studio of German Braunschweig University of Art

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Keywords: the design education of Germany, teaching method, design studio mode

Abstract:

Germany is the birthplace of modern design. From Bauhaus, the design education of Germany has formed the teaching pattern based on “studio”, which has developed so far and exerted positive influence on design education in the world. This thesis raises a set of teaching pattern of design studio that introduces domestic and foreign design competitions and commercial projects into classroom teaching by investigating the design education pattern of Braunschweig University of Art and applying this author’s design studio teaching experience in recent years.

M190277

Drama Therapy Skills for ADHD Students in Taiwan

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Keywords: Drama Therapy Skills, ADHD students, social ability

Abstract:

The study is to apply Drama Therapy Skills for ADHD (Attention Deficit Hyperactivity Disorder) students in Taiwan. The qualitative research methods are utilized. The Social Status Assessments are taken on an ADHD student in order to compare one's social status changes in the regular class and in the ADHD students. According to the Social Preference Rank, the social ability of the ADHD student can be identified.

M190278

Exploring the Education and Practice Methods of Innovation and Entrepreneurship for Art Design

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Keywords: Innovative and entrepreneurial education, Art Design, curriculum

Abstract:

Professional talents in Art Design are the main force of national innovation and entrepreneurship. The paper analyzes the problems Chinese art design graduates will encounter, including industrial limitations, limited entrepreneurial forms and low success rate, etc. It comes up with the idea that Art Design should take into consideration of the major's characteristics, reasonable curriculum and scientific teaching evaluation in terms of cultivating professional and entrepreneurial talents. Special attention should be focused on nurturing the professional personality and team-based learning style for students, and guiding them to the teaching and learning model of innovative and entrepreneurial methods featuring the cross-border integration of disciplines.

M190279

The Influence of Artistic Expression on Engineering Students' Learning Perception

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Keywords: innovative curriculum, Arts-infused Curriculum, Engineering teaching

Abstract:

The trend of global cross-disciplinary, The STEAM teaching regards art as a powerful tool for students to learn and find problems. Technology always comes from human nature, but it is difficult for engineering students to achieve both technology and perception when designing goods. Therefore, this study adopts the teaching action research method to bring engineering students into the artistic situation by means of artistic exhibitions, expand the students' perception of the senses and stimulate the creativity of the thought products, and enhance the students' design of the products in the human part. Consideration. The results are presented in two parts: first, the student's situational expression of the product design proposal is improved; second, the student's ability to consider color and technology interactions is significantly improved.

M190281

The Study on Geometric cylinders of Induced Movement with Eye Tracking

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Keywords: Dynamic, Induced Movement, motion perception, eye tracking

Abstract:

This study mainly combines psychophysical method, experimental measurement and experimental dimensions and methods of dynamic tracking measurement of eye motion. Induced Movement of motion perception caused by dynamic formation involves relation between visual illusion perception and eyeballs. This study will use equipment and technology of “eye tracking” to conduct eye tracking motion research through the “pursuit motion” in the basic form of eye motion, and analyzes perceived trends saw by subjects.

M190282

Study on Teaching Mode of Advertising Design in China

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Keywords: Design education, Teaching mode, Advertising design, Design mind

Abstract:

Advertising design acts as a significant branch learning of design education in any country. The success of advertising design education implies whether it can consistently and stably output qualified and excellent design talents to domestic design industry. Therefore, advertising design has held an influential position in design education.

This thesis discussed the teaching mode and generality thinking of advertising design in current design education in China. By studying the training method of creative thinking, and the "proposal-style" teaching method as well as the teaching mode of "cross-teaching of industry-university-research", it analyzed the advantages and disadvantages now available of the current teaching model in advertising design education in our nation. Besides, it identified some issues and discussed available solutions at the same time.

The thesis put forward that emphasizing the development of a single discipline is not a smart move. Based on that, it discussed the influence and importance of establishing a systematical and sound knowledge system upon advertising design education. It firstly put forward the concept of "copying of design" and offered an idea for its own on the training mode of creative thinking in advertising design.

M190283

Periodic Table Collector Puzzle

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Keywords: Periodic Table, Junior High School, Mobile App

Abstract:

Memorizing all elements of the periodic table seems tricky during junior high school. If a table game that offers you and your classmates to play it with pleasure, it will help you to understand the elements and atomic number. With the combination of digital numbers, the atomic order is converted into a combined code of 0 and 1. Then, the combined code is distributed on seven cards. Students used these seven cards or managed their cards in a mobile app to guess the selected element symbol.

M190284

Flipped Classroom of Science Instruction Module- Development and Effectiveness Evaluation of Literacy Orientation and Cross Field Curriculum Module in Vibration of Paper Cup Speaker

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Keywords: Flipped Classroom, Maker, Cooperation and Sharing, doing-learning-thinking-sharing

Abstract:

Different from traditional science education methods that emphasize scientific knowledge and the development of students' abilities, the main purpose of this research is to twist the traditional science education model, design a simple and easy method for the middle school students to learn and make an easy "In-class-making teaching aids". By the production course of teaching aids making for cross-disciplinary, the students are allowed to construct scientific concepts and cultivate the core literacy for future life in the process of "doing-learning-thinking-sharing", problem-solving, and collaborative learning.

For middle school students, the courses on sonic and current magnetic effects are both abstract and difficult. Based on the literacy orientation and curiosity of the students, this study develops the literacy-oriented cross-disciplinary courses, "Paper Horn Vibration Course Module" which includes the "Vibrating Worm Course", "Paper Cup Speaker Sonic Course", "Paper Cup Horn Current Magnetic Effect Course" and the "Paper Cup Speaker Music Box Course" which combines these three courses above.

The course is carried out through the following four activities. Self-making horns, self-learning the theory of horns, concept clarification internalization, and sharing self-study report. After the actual participation of 56 eighth-grade students in the two classes of this study, the descriptive statistics of their pre- and post-test scores are below the significant level of 0.01. Its pre-test and post-test scores are statistically significant difference ($P < .001$). The learning outcomes are presented by students on the study sheets and concept maps, the students have made considerable progress in terms of content depth and principle concepts.

M190285

The Application of Mobile App in Medical Service System

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Keywords: Mobile App, Medical Service, Patient Satisfaction Rate, Hospital System

Abstract:

With the prevalence of the Internet, the application of information technologies in everyday life is becoming increasingly common. Hospitals are no exception. In hospital system, the application of Mobile app become the most users including staffs, patients and their family are willing and expecting to make use of new technology. The aim of this study provides a patient-focused mobile app to pro-mote the medical app service thus improving medical quality. There have three aspects in these major functionalities. Firstly, the app is self-developed, which facilitates integrating, upgrading and controlling. It is cost-effective while being applied in a hospital service system. Second, the app is with membership control and is connected well with Healthcare Information System (HIS). The patients are able to search their part of medical record easily and securely if necessary. Third, it has some novel ideas are implemented to better user experiences and convenience. Data collected from the official website, such as Google console, demonstrates the high download rate and satisfaction rate for the mobile app.

M190286

An Overview of Information Technology Integration into English Teaching and Learning in Mongolia

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Keywords: Information technology, Learning and Teaching English in Mongolia, Learning weakness, Learning motivation strategy

Abstract:

English is taught as a mandatory second language in schools and is one of the most important subjects for students for university's entrance examination in Mongolia. This study aims to enquire into what weakness in Teaching and Learning in the English classroom and if Information Technology are used to further support their learning process success. The method used for the study is qualitative interviews, which six interviews with English teachers were worked in junior high school and universities and with six students who were studied in junior high school and universities.

Strategy inventory for language learning (SILL) questionnaire is used to estimate how often students employ specific Mongolian students' strategies of language learning. It helps teachers to figure out that their students profile of strategies and then they can define suitable methods or approach to teaching English in their classroom. The result showed that there are essential features that can make provision for better opportunities for teachers and students in the English classroom. On the other hand, this research suggested to use information technology in teaching English for motivating the students to learning in class and learning process could be more interesting and fruitful.

M190288

Controllable Micrometer Positioning of Piezoelectric Actuators Using an Adaptive Fuzzy Eliminator

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Keywords: Micrometer, Positioning, Modeling, Adaptive Fuzzy

Abstract:

In this investigation, an adaptive fuzzy control design is proposed for piezoelectric actuators which are made of piezoelectric material and is with the micrometer positioning capability. This proposed piezoelectric actuator possesses promising characters of the small size, fast response, high stiffness, and large blocking force. For mitigating nonlinear hysteresis, modeling uncertainties, and environmental disturbances of piezoelectric actuators and achieving accurate positioning, this proposed adaptive positioning method integrates an adaptive fuzzy modeling algorithm and a robust eliminator. The proposed adaptive fuzzy modeling algorithm is developed to approximate the unknown model of piezoelectric actuator. As to the robust eliminator which can simultaneously cancel the effect of unknown model and eliminate influences environmental disturbances, it is used to converge the positioning error and achieves accurate micrometer (μm) positioning. From simulation results and practical tests, $1 \mu\text{m}$ positioning accuracy can be obtained for this proposed method even huge modeling uncertainties and environmental disturbances appear. These depicted advantages delivered the possibility for piezoelectric actuators being high accuracy industrial machinery.

M190289

The innovation of art design educational idea in the new era

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Keywords: Art design education, Educational activities, Innovation ability

Abstract:

Culture exists in art. Under the influence of social and cultural atmosphere, great changes have taken place in artistic form. The era of globalization relies on the vigorous development of computer technology, and society has entered a new information age. Some ideological disciplines which can reflect the majority of the people are constantly emerging, which greatly enriches the content of art education, but also makes it more diversified and complex. At this time, the traditional concept of art education talent training mode will be difficult to continue to exist, which requires the use of new concepts to re-examine the talent training mode. Art educator Viktor Lowenfeld (1947) said: in art education, art is only a way to achieve goals, not a goal; the goal of art education is to make people more creative in the process of creation, regardless of where this creativity will be applied. In modern art and design education, the development of the new era requires that design artists have innovative consciousness and ability. The so-called innovative ability refers to a kind of originality reflected in the process of creating themselves and objects. It is the motive force of the development of human society, and also the soul and essential requirement of art design. Throughout the history of art education, we can easily find that before the eighteenth century, art education tended to be beautiful and decorative. Art education after nineteenth Century tends to be practical and creative. However, due to various reasons, there is a tendency of emphasizing skills rather than innovation in our art design teaching, so it is difficult to reflect the theme of art design and cannot meet the requirements of modern society for art education.

This paper focuses on the effective strategies of innovating modern art design education from the perspective of art design education in the new era, aiming at illustrating the importance of innovating modern art design education, with a view to providing reference for modern art design education.

M190290

A Study of Multidimensional Model for English Phonetic Acquisition with the Support of Mobile Technology

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Keywords: Multidimensional model, Mobile technology, English phonetic acquisition, English proficiency

Abstract:

With the economic globalization, college students should constantly improve their English proficiency to meet higher requirements. Phonological competence, to a large extent, has a great influence on learners' evaluation of their overall English learning ability, which eventually will affect their English academic achievements. Therefore, it is necessary to construct a scientific and feasible model for English phonetic learning. And the rapid development of mobile technology creates a new opportunity for the realization of the model. Teachers can optimize the relevant apps in mobile devices, and instruct learners to start from learning segmental phoneme to mastering suprasegmental features, which can help them make their speech clear, fluent and easy to understand. Then, a large variety of language development activities, such as English recitation contest, English movie dubbing competition, English drama performance, English speech contest, and English debating competition, etc. can be held to help enhance all the language skills. The purpose of this article is to build a multidimensional learning model for English phonetic acquisition based on mobile applications, which allows learners to develop their English phonological competence anytime anywhere with the help of mobile technology and provides better opportunities for learners to improve their English proficiency.

M190292

Problems in packaging and delivery combined with countermeasures in design education

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Keywords: express delivery, behavioral observation, packaging design professional education

Abstract:

According to the delivery behavior of express parcels in a residential area in Shanghai, observe the behavior patterns of couriers and people in the process of delivery, so as to explore the problems of packaging in express delivery, and propose improved suggestions and measures for express packaging. The above situation proposes countermeasures for the education of packaging design in undergraduate education. Research methods: through observation, data statistics and analysis. As a result, it was found out from the observations that: 1. Due to the concentrated concentration and large quantity of courier packaging in the residential area, the general courier service was not delivered to the door. 2. The loss of the parcel was caused by the limitation of the delivery site. 3. The part of the package was made public. Storage is easy to cause leakage of personal information. 4, the current environmental problems caused by express packaging. It is recommended to increase the research on information processing, logistics data and environmentally friendly packaging materials in undergraduate education in packaging design.

M190300

Design and Realization of AR-based Eye Disease Experience App

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Keywords: eye disease experience, app, Unity shader, VR

Abstract:

China has the largest number of blind in the world. If we may understand the cause of eye disease, prevent it ahead of time, and treat it in time, the number of blind will be reduced significantly. Thus, it is of great necessity to put more efforts and money against the prevention and control of eye diseases. Design and development of the eye disease experience app may facilitate people's understanding and experience of eye diseases, featuring in the eye disease prevention field. Multiple symptoms are simulated with the unity shader in this paper, the eye disease App Different World with immersive headband equipment has been designed to create a better sensual experience.

M190301

Creation from the perspective of "living soundscape"-- taking the example of H. Gorecki Sting Quartet No.1

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Keywords: Gorecki, living soundscape, contrast, acoustics, texture

Abstract:

Using the method of "living soundscape" -- analysis -- "living soundscape", this paper makes deep exploration on Polish famous composer Gorecki's String Quartet No.1. It analyzes and deduces the penetration and comparison of acoustical material between longitudinal constitution and horizontal layout, to seek for inevitability and occasionality between "living soundscape" experience related to sense of principle of rational organization in auditory sense. In this way, the paper tries to establish a "living soundscape" based musical autonomy model so as to provide foundation for research on visual organization of sound.

M190302

Teaching Exploration on Project Planning Course of Digital Media Art Specialty

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Keywords: Digital Media Art Specialty, project planning, case teaching method, project teaching method

Abstract:

This paper analyzes the shortage of traditional teaching method for the Project Planning Course. Through the training objective of Digital Media Art Specialty and the vocational requirements on creative planning position in digital media industry, it makes practical exploration on the teaching method for the Project Planning Course offered by Digital Media Art Specialty based on case teaching method and project teaching method, so as to efficiently improve students' awareness of project planning, capability of independent inquiry, collaborative innovation and project practice.

M190303

Research of Interaction Method Design for In-flight Entertainment System Based on Passengers' Preference

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Keywords: In-flight entertainment system (IFE), ux, interaction methods, passengers preference, next generation cabin

Abstract:

In-flight entertainment system (IFE) is a multimedia entertainment platform provided by Airlines Company in their cabin. From 1990s, more and more airlines company spent billions of money to improve their entertaining and user experience of IFE in order to win more market. Traditionally passenger general use remote control handle to join the IFE interaction. Nowadays there are many new devices such as touch screen, smart handle, PAD be the interaction control platform. In this paper, we research the different interactive methods based on passengers preference to explore a new interactive method to build a next generation cabin. That will improve the entertaining and user experience of IFE.

M190305

Research on Teaching Design and Construction of Role Design Course under Mobile Internet Context

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Keywords: Role design, role positioning, role derivation, role connotation

Abstract:

The mobile Internet environment provides guidance for market development and aesthetic orientation of digital media art design. The Role Design course as a basic course for digital media art design plays an important role in major directions of game design, animation design, film and television special effects, APP application, virtual reality, etc. By exploring the teaching system, teaching methods and contents of Role Design under the digital media art design major, this paper try to build a more systematic and comprehensive digital role design platform for students, to focus on how to make students maximize the ability of their own innovative thinking in the course teaching process, and to ensure that the design concept is superior than the design behavior, the design idea better than the design specification, and the design process more important than the design result in different links of the teaching process.

M190306

Prediction of Relations between Leaching rate of rare Earth Mineral and the Density of its Mother Liquid Based on HGEP-PTS Algorithm

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Keywords: HGEP-PTS algorithm, rare earth mineral, leaching rate, prediction

Abstract:

Aiming at the problem of insufficient computation efficiency of GEP algorithm in function funding, this study improves it based on parallel tabu search algorithm and applies it in rare earth column leaching experiment and discusses the influences of ammonium ion density, sulfite density and rare earth ion density on the leaching rate of weathered crust strain amass-type rare earth. It could be found from example analysis that the prediction error of improved gene expression programming model is increased 3 to 5 times of that of traditional gene expression programming and high-precision model of relations between rare earth leaching rate and the density parameters is obtained.

M190307

Study on Subtitle Design in South Korean Variety Show

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Keywords: Subtitle Design, South Korean, Variety Show

Abstract:

This article through the analysis of the subtitles of variety shows, to discuss South Korean high audience rating variety shows in many aspects from the property and function of the subtitles, analyze the advantages and disadvantages of subtitling and in-depth study and rich the patterns of manifestation of TV subtitle forms, perfect the functions and roles of television subtitles, further to improve the postproduction level of TV variety shows, and discuss what kind of impact the subtitles of recent variety shows have on the audience when seeing and hearing programs.

M190308

The Study of Commercial Business Model of Circuit Training in Elder People Health Club

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Keywords: Elder People, Business Model

Abstract:

The primary aim of this research is to understand the commercial feasibility of gymnastic ring equipment at senior citizen fitness clubs. Through a literature review, we discovered the “four sectors and nine factors” operation model theory. They are a. consumer interface, which mainly consists of target customers, distribution channels, customer relationships, etc.; b. service interface, which consists of value propositions; c. internal management, which consists of critical activities, resources, and partners; and d. finances, which consist of cost structure and revenue streams. We used these to build the senior citizen fitness club operation model.

M190309

The Research on the Impact of Design Innovation Competence -Taking : STEAM Educational Curriculum of the Elementary School as an Example

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Keywords: STEAM, Innovation Competence, Students

Abstract:

The goal of innovative competence requires innovative knowledge, capability and attitude for students to adapt themselves to lifelong development which connects with the future. Students on starting the join the classroom into real world. According to the future educational trend, Attach importance to students' individual difference, learning method, critical thinking and the ability to find and solve the problems. STEAM(Science, Technology, Engineering, Arts, and Mathematics) education cultivates the ability in implementation, invention and innovation as well as it advocates the educational spirits of "interdisciplinary learning, implementation, application, problem solving with 5-sense learning". Through STEAM course techniques used by elementary school students, this research discusses the effect on the design and innovative competence of elementary school students.

Through TAM (Technology Acceptance Model) model, this research discusses student's acceptance and satisfaction of using STEAM teaching. In accordance with AHP, STEAM course is constructed and promoted as well as the construct factor weight emphasized by student's should be researched.

The research finds that:

- (a) Student's acceptance and satisfaction for STEAM teaching require to be high.
- (b) STEAM course can improve student's design and innovative competence in which the satisfaction for learning effectiveness is high.
- (c) STEAM course, student's easy learning and easy acceptance become the primary construct factor.

M190311

A Study on the Intertextuality of the Antiquarian Illustrated Edition of the "Romance of the Three Kingdoms" and Chinese Shadow Play

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Keywords: Romance of the Three Kingdoms, Intertextuality, Image, Shadow Play

Abstract:

The complete book of the "Romance of the Three Kingdoms" combines folklore, drama, huaben (Chinese novella written mostly in vernacular language) and official history. It is good at portraying characters and focuses on the depiction of war. The images in the illustrations of Ancient Books provide abundant image resources for future generations in the field of design art. The drama of politics and war in Chinese opera, the shadow play that originated from the story of the Three Kingdoms, the cut-out figures in the shadow play are classified according to the drama and also, indirectly, influence the way of presenting the image in the book.

This paper discusses the intertextuality between the Antiquarian Illustrated Edition of the "Romance of the Three Kingdoms" and Chinese Shadow Play by means of content analysis. the findings of the research are: 1. The shape and posture of the delicately illustrated figure adopt the most common "five features" of the front and side of a shadow puppet, the proportion of the head to body is "6 to1".The carving method of shadow play also borrowed the print techniques of relief and hollow relief. 2. The shadow puppets' heads and bodies must be made in advance and they must be interchangeable so as to play different roles by just replacing the heads. The narrative illustrations are time-consuming to print and the same method of interchanging the puppets in shadow play is used to replace the figures. 3. Scenes and objects in narrative illustrations, the scenes and props in the shadow play are presented symbolic techniques.

M190312

Research on the Painted Makeup Design Course based on Large Open Online Courses (MOOCs)

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Keywords: Digital learning, MOOCs, Self-discipline in Learning, Massive Open Online Courses

Abstract:

This study aims at probing the newly established design course, Creative Color Makeup in Taiwan Imagery, which is operated under the MOOCs plan. The study analyzed the relations between the motivation of the students for taking this course and considering the self-discipline of the students for learning. The methods of this study include Questionnaire and SPSS survey data analysis. The result shows that in the design course of Creative Color Makeup in Taiwan Imagery established by MOOCs, in terms of self-discipline of learning, rather than the difference in status of the students. In addition, based on the motivation of course selection from individual student, the students of freshmen and seniors from National Pingtung University of Science and Technology show a major motive of fulfilling their credit hour. The results can be used as a reference for decision making on any course establishment through MOOCs in the future.

M190314

Discussing the Fundamental Construction of Design Discipline Under the Era of 'Makers'

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Keywords: Makers, Design fundamental construction, Design discipline

Abstract:

The development of the design industry has made the design profession a mainstream field. With the arrival of 'Smart' and 'Maker' markets, which help drive the Third Industrial Revolution, the closely-related design revolution has also emerged in new forms in this new age. In recent years, words and phrases such as 'Makers' and 'fab lab' have frequently appeared on our living society. There have been promoted and discussed for the 'Makers' and even 'Designers'.

However, as we re-examine the rapid growth of Design in its short history, we find many systematic shortcomings. The design industry is growing at an astonishing rate as it becomes part of more and more aspects of our society. But, Design as a systematic field of academia is falling behind. This leaves Design discipline to stay in blindness in a long term. Furthermore, in the postmodern society, the fields of design study was changed from internal research to the connection and integration with Pan- interdisciplinary. With the innate 'creative' nature of design, Fields covered by design is continuously expanded. In a way, we can see that design has become 'deified' and omnipresent.

The goal of this study is to investigate the formation of the design field by dissecting issues related to the 'Maker' movement, thus discussing ways to better understand Design and its formation as a discipline and provide a new perspective on design study.

M190315

Feasibility Analysis about the Thought of "Harmony between nature and man" in Industrial Design Teaching

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Keywords: culture, modern industrial design and Taoist thought

Abstract:

In the current situation of modern industrial design in China, the main problems are lack of cultural input, excessive plagiarism and insufficient innovation. These problems reflect the unclear cultural concept in industrial design and the shortcomings of design culture. Chinese culture has a long, broad and profound history. So it can be used in the teaching of industrial design or solve those problems. This article tries to explore the excellent transmission of modern industrial design and Taoism and understand the importance of Chinese traditional culture for modern industrial design teaching by studying the classical core thoughts of Taoism, such as "Taoism follows nature", "harmony between man and nature" and "Taoism does nothing but do something".

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Discussion on the promotion of industrial design competition for industrial design teaching in recent years

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Keywords: Industrial Design Competition, industrial design and talent training

Abstract:

Industrial design is a creative activity, which applies the process of solving strategic problems to products, systems, services and experiences. With the increasing importance of industrial design, the aim is to meet people's physiological and psychological needs. The emergence of competition in industrial design at domestic and abroad undoubtedly provides a rare opportunity for students who major in industrial design to create and practice. This paper systematically analyses and studies the general situation of industrial design competition and the significance of industrial design competition for the training of industrial design talents and the teaching activities of "promoting learning by competition", so as to improve the design level of students who major in industrial design.