



PROCEEDINGS

The 5th National and International Research Conference 2022 NIRC V 2022

*“Universities for Local Development Based
on Sustainable Development Goals”*



QR Code รายงานการประชุมระดับชาติ
(QR Code for National Proceedings)

QR Code รายงานการประชุมระดับนานาชาติ
(QR Code for International Proceedings)



14 February 2022

Buriram Rajabhat University

(Online & Onsite)

ISBN (e-book) : 978-974-692-444-3

CONTENTS

	Page
Science and Technology (Oral Presentation)	1
A Career Path in The Regional Universities of Turkey for Sustainable Development : Lessons Learned İlhan Çağırğan	2
Life Cycle of <i>Papilio demoleus malayanus</i> Wallace, 1865 on Host Plant of Family Rutaceae in Minsu Environs in Kyaukse Township Khin Myat Kyu	3
Genetic Diversity of the Genus <i>Thunbergia</i> Using ISSR and SRAP Markers Natpakun Ampun Pheravut Wongsawad	11
Utilization of Yeast-Fermented Broken Rice as Native Chicken Feed Narumon Somkuna	20
Health Sciences (Oral Presentation)	21
Effect of Opaque Porcelain Firing Temperature and Holding Time upon Interfacial Fracture Toughness of Milling Metal-Ceramic Alloys Nuttida Rengpattanakij Niwut Juntavee	22
The Effect of Different Sintering Times and Temperatures on the Translucency of Monolithic Zirconia Chutikarn Jaralpong Niwut Juntavee	34
Effects of Walking Combined with Arms and Legs Weight Loading Exercise on Physical Performance in Elderly Women Wareerat kokittipong Pruchaya Chumvangvapee Piyawat Luesopha Cherdasak Kaewkamada Widsarut Sekaew Kittikoon Boonkate	46
Effects of High-intensity Interval Training on Obesity: A Mini Review Minjun Liang Yang Song Yaodong Gu	55
Pathological Effects on Biomechanical Function and Strategy Adjustments during Gait Termination: A Systematic Review Yuhuan He Xuanzhen Cen	62



CONTENTS (Continued)

	Page
Multilingualism and Its Impact in North-East India Irom Gambhir Singh	153
Attitudes towards Multilingualism at Secondary Schools in Bangladesh Sree Bidhan Chakraborty Himadri Sekhar Roy	154
Student Centred learning in the 21 st Century Willy A Renandya	155
The Role of Youngers for Global Sustainable Governance : The Implication for Higher Education Innovation Ted Yu-Chung Liu	156
The Role of Vocational Training in Myanmar Ni Ni Oo	157
A Synthesis Study of Writing Approaches Employed in the Researches on Teaching Writing Sittisak Pongpuehee Nawamin Prachanant Saowarot Ruangpaian	167
Effectiveness of Using an Outcome-based Approach to Design Contents of an In-service Training Program for Training secondary school English Teachers in Laos Lakaisone Saiyachit	176
The Effects of Using Padlet Application (PA) to Enhance Writing Ability of English-Majored Students at Savannakhet Teacher Training College, Lao PDR Phouangphet Sounthalavong Khonesak Keomaneevong	177
Learning Achievement and Satisfaction by Using Collaborative Learning in Information System Analysis Course Passakorn Chumpoonta	178
Improving Grade 3 Students' Vocabulary Knowledge through Communicative Activities Thidarat Klachiew Saowarot Ruangpaian Nawamin Prachanant	188
Administration Psychology Model of University in Thailand Nipa Pongvirut	200

CONTENTS *(Continued)*

	Page
Blended Learning During Pandemic Corona Virus: Teachers' and Students' Perceptions at Chaiyaphum Rajabhut University Ratchakorn Praseeratesung	201
A Synthesis Study of Assessing Learners' Pragmatic Competence Jansuda Boontree Nawamin Prachanant Saowarot Ruangpaisan	212
Study Abroad Opportunities and Intercultural Competencies of University Students in Myanmar Ni Ni Hlaing	223
A Need Analysis of Blended Learning to Enhance Chemistry Specialization Students' Metacognitive Skills and Attitudes Mya Thet Mon	225
University Students' Self-Efficacy, Attitudes, and Intentions toward Chemistry : Myanmar Context Mya Thet Mon	226
An Analysis of Illocutionary Acts in the Short Story <i>A Small Sacrifice for an Enormous Happiness</i> by Jai Chakrabarti Khin Hsu Thwe	227
The General Attitude of Students and Teachers towards Effectiveness of Using Short Stories in EFL Classrooms of Myanmar Mary Akkarapon Nuemaihom Kampeeraphab Intanoo	236
Benefits of Dramatic Play for Enhancing University Students' Understanding of Poetry Mary Akkarapon Nuemaihom Kampeeraphab Intanoo	237
Gender and Language Use in Myanmar Context Soe Moe Thu Wilai Phiwma	238
The Effect of Classroom Interaction on Developing the Learner's Speaking Skill : Myanmar Context Soe Moe Thu Wilai Phiwma	250
A Synthesis Study of literary Texts to Enhance EFL Students' Critical Reading Skills Siraprapha Ratanaruamkarn Surachai Piyanukool Akkarapon Nuemaihom	251

CONTENTS *(Continued)*

	Page
Building Students' Global Competency in English Language Classrooms at Undergraduate Level in Myanmar Yee Mon Cho Akkarapon Nuemaihom Kampeeraphab Intanoo	263
Implementation of Teaching Practices with Respect to the Integration of Global Citizenship : ELT Context Yee Mon Cho Akkarapon Nuemaihom Kampeeraphab Intanoo	264
ICT Skills and Challenges Faced by High School Teachers of Inle Lake Located in the Nyaungshwe Township of Shan State in Myanmar May Theint Thu	265
The 21 st Century Learning Needs of University Students: Teachers' Perception May Thein Thu	266
University Students' Perceptions on 21 st Century Learning Skills: Myanmar Context Khine Zin Thant Jasmine Kong-Yan Tang	267
Uses and Limitations of Questionnaires in Social Science Research Khine Zin Thant Jasmine Kong-Yan Tang	268
Foreign Language Anxiety and Test Anxiety of University Students : Myanmar Context Su Mon Aung	269
Foreign Language Classroom Anxiety and Reading Anxiety of EFL Students in Myanmar Su Mon Aung	270
An Error Analysis of Thai into English Translation of Second-Year English Majors Somyong Som-In kampeeaphab Intanoo Akkarapon Nuemaihom	271
Beliefs of University Teachers: Personal Skills of Teacher Leaders Zarni Mar Peng Qingyue Chang Woojin	282
Student Perception on Traditional English Language Testing in a Myanmar Context Aye Aye Mar	283
Teachers' Perceptions on the Effectiveness of Group Work and Pair Work towards CLT in ELT Classrooms Ohnmar Win Yee Mon Cho Nawamin Prachanant Saowarot Ruangpaisan	284

CONTENTS (Continued)

	Page
Professional Development Needs of Myanmar University Teachers of English Kyaw Sein	285
Culture Learning in Myanmar EFL Context Kyaw Sein	286
Assessment Practice of English Language Teachers in Myanmar Zarni Mar	287
Confucian Conception of Critical Thinking in Teaching English as a Foreign Language in Myanmar Soe Darli Wai	288
Challenges in Academic Research Experienced by Postgraduate Students in Myanmar Higher Education Context Soe Darli Wai	289
Effects of Virtual Classrooms on English Language Skills and Learning Aspects : Review of Recent Cases under COVID-19 Pandemic Yuttachak Lamjuanjit Nawamin Prachanant Chukiat Jarat	303
Quality Enhancement of Master's Supervision in Chemistry Specialization at Selected Universities in Myanmar Thinn Myat Nwe Tika Ram Pokharel	317
Successful Studying in Doctoral Education of Myanmar : Botany Specialization Nwe Nwe Hninn	318
The Effects of Captioned Videos on Vocabulary Learning : A Meta-analysis Aung Myo Hein	319
Teaching Professionals' Opinions and Views on Experiences of Attending Academic Conferences Than Than Win	320
Successful Leadership and Student Outcomes at Universities in Myanmar Khin Mar Mar	321
Study of Flipped Classroom Teaching Method together with Cyberspace Learning to Promote Chinese Contemporary Literature History Achievement of University Students Chang Yipeng Nitikorn Onyon Mesa Nuanstri	322

CONTENTS (Continued)

	Page
<p>The Effect of Learning Management Using Cooperative Learning together with Superstar Mobile Library Application to Enhance the Searching for Information Ability of University students Reviewer Regina Yuan Liangzhi Nitikorn Onyon Thitiporn Pichayakul</p>	333
<p>A Synthesis Study of Metacognitive Strategies Employed in the Researches on Teaching Reading Wiphaporn Dangsi Chookiat Jarat Nawamin Prachanant</p>	342
<p>The Effect of Aided-study Class Teaching Mode on Mathematics Achievement of Grade 4 Students in Primary Schools Zhang Ancheng Suwana Juithong Phithack Nilnopkoon</p>	356
<p>The Effect of Cooperative Learning Using STAD Technique on Mathematics Achievement of the Fourth Grade Students in Primary Schools Yang Pengfei Phithack Nilnopkoon Suwana Juithong</p>	363
<p>Effect of Learning Management by Using Davies Instructional Model on Ability of Automobile Engine Disassembly and Adjustment and Learning Achievement of Students in Jiangsu Electronic Information Vocational College Yin Yao Phithack Nilnopkoon Suwana Juithong</p>	370
<p>A Study of Dalcroze Music Teaching Method on Music Class to Promote Musical Literacy of Primary School Students Zhaoyi Phithack Nilnopkoon Kanreutai Klangphahol</p>	380
<p>Study of Case Study Method through Microteaching Method to Enhance Teaching Practice Skills of Students Majoring in Chinese Language and Literature Xiao Qianlin Sombat Kotchasit Angkana Karanyathikul</p>	387
<p>Effect of Learning Management Using Problem-Based Learning together with the Mobile Phone Application on Students' Learning Achievement and the Ability of Landscape Design of College Students Huangfu Zhounan Sombat Kotchasit Kanreutai Klangphahol</p>	396
<p>The Effect of BOPPPS Teaching Method on Learning Achievement and Dance Performance of University Students Zhu Fengling Sombat Kotchasit Wang Tiansong</p>	403

CONTENTS *(Continued)*

	Page
Effect of Problem-Based Learning (PBL) on Music Teaching Scheme Design and Teaching Practice of Music Normal Students Feifei Guo Premjit Kajonpai Larsen Rekha Arunwong	411
International Practicum: What Students Gain and Are Challenged Bao Kham	420
Study of Problem-Based Learning Together with Questioning Technique to Promote Choreography Ability of Dance Students Wang Di Premjit Kajonpai Larsen Rekha Arunwong	421
Study of Problem-Based Learning Approach for Enhancing Learning Achievement and Students' Satisfaction Among the First Year Students on Fundamentals of Information Technology Course, Zhoukou Normal University Li Xiaofeng Lerlak Othakanon Danucha Saleewong	430
Study of State and Problems on Learning Management and Propose Guidelines on Ideological and Political Education Courses in Xinzhou Teachers University Dou Jiayu Lerlak Othakanon Wassaporn Jirojpan	439
Ambiguity Found in Advertisements Tin Moe Yi	455
Practicing Home Visit Program for School Resilience and School Effectiveness Amid the Covid-19 Pandemic Crisis : A case study of a primary school in Central Lombok, Indonesia. Zobi Mazhabi Yoyok Amirudin	466
Factors Influencing the Effectiveness of Quality Sub-District School Administration in Nakhonchaiburin Provinces Piyapat Klumgen Narumon Sakpakornkan Supatra Rukkarnsil	467
A Collocational Error Analysis in English Narrative Essay Written by English Major Students Thanakorn Kamolwet Chookiat Jarat Nawamin Prachanant	479
Educational Strategies Aimed to Improving Student Nurse's Medication Calculation Skills : A Systemic Review Nongnuch Homniam Siripinya Trakunram	489

CONTENTS *(Continued)*

	Page
On the Improvement Strategies of University Leaders' Literacy in Coping with Public Opinion Pressure Chen Jianping Kraphan Sri Ngan	501
Deepening the Integration of Production and Education to Boost Regional Economic Development Explore New Modes of School-enterprise Cooperation Jiang Renfeng Kraphan Sri Ngan	502
Exploring Student Engagement with Corpus Feedback on English Writing Nguyen Vu Quynh Nhu Nguyen Hoang Hanh An	503
Personal Narratives : A Pedagogical Intervention in Writing Christian Cudiamat Gandeza Ma. Jesusa Ridor-Unciano	516
Personal Growth Development of Students' Literary Appreciation Wendell A. Lived Ma. Jesusa Ridor-Unciano	528
Reviewers	542
Commentators	548
Editorial Board	551



Effect of Learning Management by Using Davies Instructional Model on Ability of Automobile Engine Disassembly and Adjustment and Learning Achievement of Students in Jiangsu Electronic Information Vocational College

Yin Yao¹ Phithack Nilnopkoon² Suwana Juithong³

¹M.Ed.Student, Curriculum and Instruction Program,
Valaya Alongkron Rajabhat University under the Royal Patronage, Thailand
694636511@qq.com

^{2,3}Curriculum and Instruction Program, Valaya Alongkron Rajabhat University under the Royal Patronage, Thailand
Phithacknil@hotmail.com
su_jui2012@hotmail.co.th

Abstract

The objectives of this research were to 1) compare the ability of automobile engine disassembly and adjustment and learning achievement of students before and after learning management by using the Davis' instructional model. 2) compare the ability of automobile engine disassembly and adjustment and learning achievement of students after learning management by using the Davis' instructional model with the established 70% criterion. 3) assess the satisfaction of the students on learning management using the Davis' instructional model. The sample of this study was com 40 students in Jiangsu electronic information vocational college, obtained through cluster random sampling.

The research findings were as follows:

1) The ability of automobile engine disassembly and adjustment and learning achievement of students after learning management by using the Davis' instructional model are higher than before at a statistically significant level of 0.05

2) The ability of automobile engine disassembly and adjustment and learning achievement of students after learning management by using the Davis' instructional model were higher than the established 70 % criterion at the 0.05 statistical significance level ($\bar{X} = 91.43$ S.D = 3.80473).

3) The satisfaction of the students on learning management using the Davis' instructional model is at a high level.

Keywords : Automobile Engine Disassembly and Adjustment, Davies Instructional Model, Learning Achievement

1. Introduction

Disassembly and adjustment of automobile engine is the first professional core course of automobile inspection and maintenance technology, which aims to cultivate the ability of various posts in automobile maintenance enterprises or automobile maintenance stores. Through the study of this course, students will be trained to understand the structure of modern automobile engine, understand the working principle of various engine mechanisms and systems, and operate the lifting, disassembly and adjustment of engine. It lays a foundation for further cultivating professional skills such as the use and maintenance, fault diagnosis, detection and maintenance of automobile engines, and cultivating students' thinking ability, method ability, post ability and comprehensive professional ability. However, how to effectively transform and apply teaching methods to practical teaching and improve the effect of classroom teaching is very important.

The index construction of "double qualified" teachers in higher vocational colleges is the key index whether higher vocational colleges can move forward correctly and continuously,. The quantity and quality of "double qualified" teachers basically determine the quality of teaching and training. Therefore, it is urgent to deeply study the basic elements and improvement paths of the quality of "double qualified" teachers in higher vocational colleges, effectively improve the education and teaching quality of higher vocational colleges, and cultivate and bring up a contingent of vocational education teachers with excellent quality and exquisite skills.

Problem about teaching, in the traditional teaching of engine disassembly and adjustment, theoretical teaching is the main aspect .In the teaching process, teachers pay attention to theoretical teaching, instill knowledge points, and ignore students' operation in practice .This leads students do not dare to practice and also lead students know little about the engine, bring inconvenience to the future work. Therefore, with the intention to solve this problem, the researcher studied some teaching models and methods and choose the Davis Instructional Model which consisted of 5 steps of teaching.

2. Research Objectives

This research consisted of three objectives:

2.1 To compare the ability of automobile engine disassembly and adjustment and learning achievement of students before and after learning management by using the Davis' instructional model.

2.2 To compare the ability of automobile engine disassembly and adjustment and learning achievement of students after learning management by using the Davis' instructional model with the established 70% criterion.

2.3 To assess the satisfaction of the students on learning management using the Davis' instructional model

3. Research hypothesis

1) The ability of automobile engine disassembly and adjustment and learning achievement of students after learning management by using the Davis' instructional model are higher than before.

2) The ability of automobile engine disassembly and adjustment and learning achievement of students after learning management by using the Davis' instructional model were higher than the established 70 % criterion.

(Criterion set at 70 % refers to the average score required by the college.)

4. Research Methodology

4.1 Population and Sample

The population of this study was 300 students in Jiangsu electronic information vocational college.

The sample was composed of 40 students derived by using cluster random sampling.

4.2 Research Instruments

Instruments for measuring the ability of automobile engine disassembly and adjustment and learning achievement of students were:

1) Instructional innovation : Davis' Instructional Model

In practical work, comparing the traditional indoctrination teaching with Davis teaching mode, we can combine theory with practice, master the disassembly knowledge of automobile engine in time, and apply it to practical operation, so as to understand the theoretical knowledge more directly. In order to improve students' learning efficiency, stimulate students' learning motivation, regularly evaluate students' learning situation and help students solve problems in time.

Specifically, it includes the following five steps:

(1) Tell relevant theoretical knowledge and combine video learning with practical operation to improve students' cognition of modern automobile engine structure, understanding of engine mechanism and system working principle, and operation ability of engine lifting, disassembly and adjustment.

(2) The teaching implementation process adheres to the goal of adapting to social needs and the main line of technical application ability. The design of teaching content closely focuses on the goal of cultivating skilled talents. In the teaching process, students pay attention to the understanding of automobile engine structure and principle and the cultivation of practical disassembly and assembly ability, strengthen practical teaching and pay attention to knowledge renewal.

(3) In the teaching process, innovate the teaching mode and pay attention to the integration of in class and out of class. Make full use of advanced computer simulation technology, further deepen the reform on the basis of the original teaching reform of the integration of theory and practice, and reform the original teaching mode of "theory + practice" into the teaching process of "theory + virtual simulation + practice".

(4) After each practical operation, students learn to sort out the tools and return the tools.

(5) Through the assessment process, help students master relevant operation skills in time and achieve the purpose of employment. Each group completes the operation assessment together. In the process of operation assessment, it is necessary to evaluate not only the operation skills of the whole group of students, but also the cognition of students' parts, so as to obtain the operation assessment results.2) Lesson plan: A total of five lessons based on Davis' Instructional Model with 20 class hours of theory and 60 class hours of practice.

Instruments for collecting data:

1) The automobile engine disassembly and adjustment ability tester is a performance evaluation table.

2) The tool for measuring academic performance is a paper test for automobile engine disassembly and adjustment. Each group completes the operation assessment together. In the process of operation assessment, it is necessary to evaluate not only the operation skills of the whole group of students, but also the cognition of students' parts, so as to obtain the operation assessment results. A comprehensive and systematic written examination of theoretical papers will be arranged at the end of the term.

3) Evaluate students' satisfaction on learning through Davis teaching model by using a questionnaire.

4.3 Data collection

The procedures of data collection were as follows:

1) The sample was given the pretest for measuring the ability of automobile engine disassembly and adjustment and learning achievement with constructed instruments.

2) The sample was taught according to the lesson plans based on Davis' instructional model.

3) After finishing the instruction, the sample received the posttest on the ability of automobile engine disassembly and adjustment and learning achievement by using the same instruments which were used in the pretest.

4.4 Data analysis

In this study, data were analyzed by using the statistical program according to the research objectives.

4.4.1 Compare the ability of Automobile engine disassembly and adjustment and learning achievement of students before and after learning through Davis' instructional model by using t-test for dependent samples.

4.4.2 Compare the ability of Automobile engine disassembly and adjustment and learning achievement of students after learning through Davis' instructional model with the established 70% criterion by using t-test for one sample.

4.4.3 Analyze the satisfaction of the students on learning through Davis' instructional model by using arithmetic mean and standard deviation.

5. Research Results

The results were presented according to the research objectives as follows:

5.1 Part 1: Result of comparing the ability of Automobile engine disassembly and adjustment before and after receiving Davis' instructional model by using t-test for dependent samples.

Table 1 Paired sample t-test

Group	N	\bar{x}	S.D.	t	p
Experimental group	40	88.50	4.58	-11.99	.000

As shown in Table 1, students had ability of Automobile engine disassembly and adjustment after using Davis' instructional model (post-test) greater than before using Davis' instructional model (pre-test) at .05 statistical significant level ($t = -11.99$, $p < 0.05$).

On average, Posttest scores were 88.50 points higher than Pretest scores (95% CI [79-91]).

Thus, it was concluded that, ability of Automobile engine disassembly and adjustment of students after receiving Davis' instructional model was higher than before.

5.2 Part 2: Result of comparing the learning achievement of the students before and after receiving Davis instructional model by using t-test for dependent samples.

Table 2 Paired samples test

Group	N	\bar{x}	S.D.	t	p
Experimental group	40	93.93	3.84	-11.99	.000

As shown in Table 1, Students had learning achievement after using Davis instructional model (post-test) greater than before using Davis instructional model (pre-test) at .05 statistical significant level ($t = -11.99$, $p < 0.05$).

On average, Posttest scores were 93.93 points higher than Pretest scores (95% CI [80-98]).

Thus, it was concluded that, learning achievement of the students after receiving Davis instructional model was higher than before.

5.3 Part 3: Result of comparing ability of Automobile engine disassembly and adjustment of students with the determined criteria set at 70 % by using t-test for one sample.

Table 3

Group	N	Full score	Criteria score	\bar{X}	S.D.	t	p
Experimental group	40	100	70%	91.43	3.804	105.44	.000

As shown in Table 3, since $p < 0.05$, we rejected the null hypothesis (H_0) and concluded that the mean of ability of Automobile engine disassembly and adjustment of the sample was significantly different from the average ability of Automobile engine disassembly and adjustment of the overall student population.

Based on the results, we can state the following:

The ability of Automobile engine disassembly and adjustment of the students in Jiangsu Electronic Information Vocational College after receiving Davis' instructional model was 100 from a possible full marks of 91.43 and the standard deviation was 3.804 which was statistically higher than the criterion of 70% at the .05 level of statistical significance.

Thus, it was concluded that, the ability of Automobile engine disassembly and adjustment of the students who received the Davis' instructional model was higher than 70%.

5.4 Part 4: Result of comparing learning achievement of students with the determined criteria set at 70 % by using t-test for one sample.

Table 4

Group	N	Full score	Criteria score	\bar{X}	S.D.	t	p
Experimental group	40	100	70%	91.43	3.80	105.44	.000

As shown in Table 4, since $p < 0.05$, we rejected the null hypothesis (H_0) and concluded that the mean of learning achievement of the sample was significantly different from the average learning achievement of the overall student population.

Based on the results, we can state the following:

The learning achievement of the students in Jiangsu Electronic Information Vocational College after receiving Davis' instructional model was 40 from a possible full marks of 100 and

the standard deviation was 3.80 which was statistically higher than the criterion of 70% at the .05 level of statistical significance.

Thus, it was concluded that, the learning achievement of the students who received the Davis' instructional model was higher than 70%.

5.5 Part 5: Result of the satisfaction of the students on learning through Davis' instructional model by using arithmetic mean and standard deviation.

The satisfaction questionnaire consisted of two parts: 1) close-ended questions with five-rating scales and 2) recommendations. Moreover, the first part was composed of three sections with a total of 17 items: four items for English contents, eight items for booklet design, and five items for English CD. The satisfaction questionnaire possessed the contents validity of 0.67-1.00. Look at the concise figures of their satisfaction in Table 6.

Table 6 The samples' satisfaction with the innovation

Items	Numbers	Levels of Mean	S.D. of samples	Satisfaction \bar{X}
1	40	1.19	.398	4.80
2	40	1.17	.380	4.82
3	40	1.11	.312	4.89
4	40	1.21	.414	4.78
5	40	1.21	.414	4.78
6	40	1.15	.360	4.84
7	40	1.06	.247	4.93
8	40	1.19	.398	4.80
9	40	1.21	.414	4.78
10	40	1.15	.416	4.84

The above table shows that the sample's satisfaction with innovation is between 4.78-4.93. Overall, this is the highest ranking (4.93). Considering every aspect, it shows that the acceptance of automobile engine disassembly and adjustment under Davis' teaching mode is the highest, ranking first (4.93). The second is the teaching situation of Davis' teaching method (4.89), the achievement of Davis' teaching mode and the satisfaction with teachers (4.84).

6. Discussion

The following points based on the research results were discussed:

According to the research results, the following points are discussed:

6.1 The results show that after accepting Davis teaching mode, students' ability of automobile engine disassembly and adjustment is improved. This may be because students fully

participate in teaching activities according to the steps of the teaching mode, which provides students with sufficient opportunities to practice the necessary automobile engine disassembly and adjustment skills.

6.2 The results show that students' academic performance after accepting Davis teaching mode is higher than that before accepting Davis teaching mode. This may be because students prefer to combine theoretical knowledge with practical operation learning. Through practical operation, theoretical knowledge is no longer boring, but can improve students' enthusiasm for active participation.

6.3 This study is based on the needs of the sample. Therefore, the needs of students are analyzed through course group discussion and prediction test, so as to obtain real data and develop practical innovation suitable for them. It is not only consolidates and uses theoretical knowledge in time, but also mobilizes students' enthusiasm and initiative.

6.4 When students study engine disassembly and assembly in school, the asynchronous or long-span teaching time and content makes the theoretical knowledge learned by students unable to be consolidated in time. However, due to the lack of solid and corresponding training teaching with theoretical knowledge foundation, the effect is unsatisfactory and the teaching efficiency is low, which makes the theoretical knowledge and practical ability of students unable to be guided in time.

6.5 Davis' teaching mode is applied in the course of engine disassembly and adjustment to achieve seamless connection in time, consolidate and utilize theoretical knowledge in time, and mobilize students' learning enthusiasm and initiative.

6.6 Sixteen objectives are adopted in the course. Adhere to the goal of adapting to social needs and taking the technical application ability as the main line. The design of teaching content closely focuses on the goal of cultivating skilled talents. In the teaching process, pay attention to students' understanding of automobile engine structure and principle and the cultivation of hands-on disassembly and assembly ability, strengthen practical teaching and pay attention to knowledge renewal. At the same time, establish students' correct outlook on employment and life, and set lofty goals for the future.

6.7 Adopting Davis' teaching mode in the teaching of automobile engine disassembly and adjustment can improve students' professional practice ability, help students improve their practice ability and lay a good foundation for their future career. At the same time, it can effectively solve the employment problem of higher vocational colleges.

6.8 The three experts evaluated the disassembly and adjustment of automobile engine at the highest level (4.81), and the sample's satisfaction with innovation also reached the highest level (4.74). This may be due to the following reasons: it is developed according to the needs analysis of the target group. The system development process lasts from the first stage of

data collection to the final stage after testing. This teaching model helps to improve students' efficiency in learning this course.

7. Conclusion

Through continuous investigation, exploration and discussion, students have a better grasp of the course of automobile engine disassembly and adjustment. Davis teaching method improves students' interest in learning professional knowledge, stimulates students' ability of independent learning and self exploration, cultivates innovative consciousness, and enriches the content and form of training and teaching. The combination of theory and practice has been carried out very well in the practical training of automobile engine disassembly.

8. Recommendations

The following are some recommendations based on the research results:

8.1 Teachers can communicate flexibly with the actual teaching needs of the enterprise in time.

8.2 Teachers pay attention to the learning of individual differences among students, help backward students adapt to Davis teaching mode as soon as possible, and try their best to enable each student to carry out simple disassembly and assembly of automobile engine.

8.3 Young teachers should learn more from experienced teachers, improve classroom efficiency and master methods to mobilize students' active participation.

References

- Jiang Yi Lin. (2019) research on the Internet plus double teacher teaching in the automobile specialty teaching in Higher Vocational Colleges (12)
- Lai Xinya. (2018) a study on the reform and practice of the teaching form of double teacher teaching based on Modern Apprenticeship
- Li Huan. Analysis of the influence of "double qualification" factors on the effect of Vocational College Students' skill training (11)
- Li Jinjin. (2008) prospects and Countermeasures of automobile talents training (2)
- Liu Yan, Liu Chenggang. (2020) teaching practice of micro course of university physics based on five star teaching principle (10)
- Meng ting. (2021) experience and Enlightenment of online and offline hybrid teaching mode in American universities (4)
- Mo Xiaoyun. (2018) the educational concept and reference of "student centered" in American universities (49)

- Qian Yunfeng. (2011) Barbara g. Davis's effective teaching theory and higher vocational English Teaching (12)
- Qiao Junsan. (2020) teaching reform and practice of "school enterprise double teacher" in automobile major under modern apprenticeship system (6)
- Sheng Rui. (2014) enlightenment of medical teaching mode of UCLA (11)
- Shi Hong. (2016) application of knowledge construction in teaching design of basic theory of traditional Chinese medicine and cultivation of students' autonomous learning ability (6)
- Wang Fang. (2019) teaching reform and practice of "school enterprise double teacher" in automobile major under modern apprenticeship system (5)
- Wang Mei. (2010) the Enlightenment of basic chemistry teaching mode in University of California, Berkeley (3)
- Xu Wei. (2014) from MOOC to SPOC: an academic dialogue based on the practice of MOOC at UC Berkeley and Tsinghua University (4)
- Yang Huijun. (2019) on the teaching mode of new energy vehicles in Higher Vocational Colleges under the mode of school enterprise cooperation (23)
- Ye Manhong. (2018) reflections on the reform of Biochemistry classroom teaching in Colleges and Universities: Enlightenment from the visit to the University of California, Davis (8)
- Yu Fuli. (2018) the characteristics and Enlightenment of the teaching development of American University Teachers -- Taking the University of California, Davis as an example (23)
- Yu Wenjing. (2018) what kind of teaching can be oriented to each student-- Enlightenment of reading teaching in Los Angeles Experimental Primary School (6)
- Zhang Lijuan. (2012) three important links of teaching mode in American universities (18)
- Zhang Ruixiang. (2019) thinking enlightenment from foreign teaching experience: Discussion on the teaching mode of art and design major of University of California (4)
- Zhang Ruixiang. (2020) the application of art studio teaching mode in American Universities_ Take the University of California, Davis as an example (6)
- Zhang Ruixiang. (2020) the application of art studio teaching mode in American colleges and Universities -- Taking the University of California, Davis as an example (6)
- Zhao Minggang. (2011) analysis on the practice teaching mode of American universities (1)
- Zhao Minna. (2004) discussion on three typical classroom teaching modes in American Universities -- Taking educational courses as an example (4)
- Zheng Yaoli. (2019) the construction of leadership training system for college students and Its Countermeasures