

A Family Education Model Construction Based on the WeChat Public Platform

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Abstract

Purpose – While the development of science and technology is improving the quality of people's lives, it is also constantly triggering a revolution in education. As a result, various forms of educational activity have sprung up. In the face of increasingly fierce social competition, parents have begun to develop children's multi-faceted ability from the early childhood stage. In this process, there have been a series of problems – for example, many parents can't find a proper way to educate their children. This paper aims at providing systematic guidance and assistance for parents through the WeChat public platform, in order to provide learning support for younger children. In this article, an attempt is made to find a balance between parents and children in the field of education, thereby improving the learning effectiveness of young children, making better the way parents and children interact, and promoting the healthy growth of young children in life and learning.

Design/methodology – Firstly, we read the relevant literature, trying to understand the research status and basic mode of the WeChat public platform and mobile learning. Secondly, we finished the family education learning resources' design and construction. This paper mainly used two research methods, viz. the literature research method and content analysis.

Findings – The feasibility and effectiveness of the learner support activities based on the WeChat public platform were verified through research, and the construction of the family education model based on the WeChat public platform was completed.

Originality/value/implications – Mobile technology is listed as an important technology with the potential for development and application in education. The WeChat public platform based on WeChat is a new learning resource carrier that emerged after the MOOC. Its rich interactive functions, simple interface settings and flexible access have added new vitality to the educational media. Through the construction of the family education model based on the WeChat public platform, this paper redefines the form and significance of education, and we hope that it can provide new ideas and methods for educational development.

Keywords: WeChat public platform, family education, learning assistance

1 Introduction

The continuous development of science and technology, as well as the continuous updating of technology, are changing the form and place of education, even across the age and occupation, making learning anytime and anywhere come true. As soon as the concept of "Internet + education" was proposed, it immediately exploded in the field of education, and various forms of educational activities mushroomed. WeChat, as an instant messaging application, has become one of the communication software with extremely high usage rate since its launch in 2011. At the same time, it also provides more possibilities for people's living, working and learning styles.

WeChat public platform is a new type of learning resource carrier after micro class and mooc. Its rich interactive functions, simple interface Settings and flexible access have added new vitality to the educational media. The function of WeChat public platform has been gradually expanded from the initial corporate promotion to the field of education. In just a few years, the wide range of its influence and the great effect have constantly triggered discussion and thinking.

1.1 Background

With the introduction of the concepts of mobile learning and ubiquitous learning, people have gradually entered the era of fragmented learning. Mobile learning is an important trend in the development of educational informatization. During the 12th five-year plan period, education informatization focused on promoting the construction of online learning space for everyone, creating a good condition for the development of mobile learning. The state encourages educators to make full use of the advanced experience and construction mode of mobile learning projects at home and abroad to design and build mobile learning platforms that meet the needs of domestic education development.¹

In the horizon report released in recent years by the NMC: New Media Consortium, mobile technology is listed annually as one of the most important technologies with development potential and application space in the field of education. In the past two years, the focus on the application of mobile technology in education has shifted from focusing on hardware devices to focusing on how to better study the application of education through mobile devices.²

1.2 Research contents

The research content of this paper mainly includes the following two aspects:

Status analysis of mobile learning based on WeChat public platform

Consult relevant literature and materials to deeply understand the current situation of relevant research at home and abroad; The WeChat public platform, learner support

¹孟凡立, 陈琳. 基于微信公众平台的移动学习空间构建研究[J]. 现代教育技术, 2014, (10):19-25.

²王萍. 微型移动学习的支持功能与设计原则分析[J]. 远程教育杂志, 2013:34-41.

and other concepts were defined, and the relevant theoretical basis was analyzed and elaborated.

Design of family education model based on WeChat public platform

According to the actual situation of learners, the family education mode is designed, the mobile learning environment based on WeChat public platform is constructed, and the overall framework of family mode based on WeChat public platform is proposed.

1.3 Research methods

The main research methods used in this paper are literature research and content analysis. The details are as follows:

Literature research method

By collecting and sorting out books and literature related to "WeChat public platform" and "mobile learning", the research status of relevant researches at home and abroad can be obtained, the current research hotspots and trends can be understood, and relevant materials can be sorted out and summarized to provide research basis and theoretical basis for this paper.

Content analysis

The learning theories used in the process of constructing family education model are sorted out and their functions in this study are analyzed.

2 Relevant Studies

This study will review the literature on WeChat public platform and mobile learning.

2.1 WeChat public platform - Domestic research review

In CNKI China journal full-text database, take "WeChat public platform" and "mobile learning" as the keywords for search. According to statistics, from September 2013 to December 31, 2018, a total of 230 literature materials were collected. The research on WeChat public platform in China first originated in 2013. Bai Hao et al.(2013)³ first explored the application of WeChat public platform in the field of higher education, summarized the functions and advantages of the platform, and discussed the possibility and reality of applying WeChat public platform in the field of higher education.

On the theoretical level, Wang ping(2013)⁴ analyzed the functions of WeChat learning support, compared the learning support characteristics of WeChat, weibo and other major social media, and also discussed the design principles of WeChat mobile learning. Fu Zhiwen et al.(2017)⁵ compared native mobile teaching APP with

³白浩, 郝晶晶. 微信公众平台在高校教育领域中的应用研究[J]. 中国教育信息化, 2013, (4): 77-81.

⁴王萍. 微型移动学习的支持功能与设计原则分析[J]. 远程教育杂志, 2013: 34-41.

⁵付志文, 彭蕾. 微信教学 APP 的设计与实现[J]. 中国教育技术装备, 2017: 35-40.

WeChat teaching APP, pointed out the advantages of WeChat teaching APP and summarized its reference value. Chen Xuemei(2018)⁶ introduced the background, architecture, functions and key technologies of the micro-course platform design in detail, and designed and developed a micro-course learning platform that can provide learners with learning anytime and anywhere by using the Vue Think framework. Xie Yinfen(2018)⁷ WeChat public platform of fragmentation are analyzed support functions such as interactive learning, points out the existing knowledge structure system, such as information overload problem, in the end of this paper have put forward, the teacher can reasonable use WeChat public platform improve the utilization value of learning resources, fragmentation to study the characteristics of flexible is an important way of cultivating creative personnel in colleges and universities. Tian Yuqin et al.(2018)⁸ analyzed the necessity of using WeChat public platform to carry out adult education, explored the main content of mobile learning space construction, and on this basis proposed the measures to build mobile learning space of adult education under WeChat public platform.

In terms of practical teaching research, Liu Hua et al.(2017)⁹ conducted an empirical study on the "six-step method of network cable production" course, introduced the WeChat public platform for mixed teaching practice, and constructed a mixed teaching model based on the WeChat public platform. Based on the WeChat public platform and other "Internet +" technologies, Li Gui et al.(2017)¹⁰ developed the university classroom teaching management system, forming a new interactive teaching mode. The practice has proved that this system not only improves the teaching effect, but also enhances the interaction between teachers and students. Taking "VF program design" course as an example, Yan Yingqi(2016)¹¹ built a learning activity system of WeChat platform, integrated mobile courses into practical teaching, and finally aroused students' interest in learning and improved the learning effect. Wang ping(2014)¹² designed and developed the WeChat platform for the course programming C language, and applied and analyzed it in practical teaching. Finally, through questionnaire survey and interview, she found that WeChat enriched the learning content and could effectively support learning.

⁶陈雪梅. 微信支持下的微课学习平台关键技术及实现[J]. 教育现代化, 2018, (17):134-137.

⁷谢印芬. 基于微信公众平台的碎片化学习模式研究[J]. 教育现代化, 2018:128-129.

⁸田玉琴, 吴成巍, 贾玉洁. 微信公众平台下成人移动学习空间构建[J]. 中国成人教育, 2018:21-23.

⁹刘华, 敖谦. 基于微信公众平台的混合式教学——以“网线制作六步法”课程为例[J]. 现代教育技术, 2017, (1):48-54.

¹⁰李贵, 费星红, 陶平. 基于微信公众平台的课堂教学管理系统开发[J]. 现代教育技术, 2017, (6):108-114.

¹¹闫英琪. 微信支持下的移动学习活动设计与实证分析——以“VF 程序设计”课程为例[J]. 电化教育研究, 2016:88-94.

¹²王萍. 微信移动学习平台建设与应用[J]. 现代教育技术, 2014, (5):88-95.

2.2 WeChat public platform - Foreign research review

WeChat is the best social app in the country, but it's number three in the world so far, followed by WhatsApp and Facebook, which are number one in 168 countries. The function of Facebook is similar to that of weibo, while the function of WhatsApp is similar to that of WeChat. The research on WhatsApp in foreign countries started as early as 2013, which is basically the same as that in China.

Aburezeq, Ibtehal Mahmoud (2013)¹³ studied the influence of WhatsApp on the interaction of Arabic teaching courses in 2013. The results showed that the use of WhatsApp effectively enhanced the interaction between students and students, and the WhatsApp platform provided a space for communication, expression of ideas and exchange of information anytime and anywhere. However, the cost of using WhatsApp, the extra work involved, the distraction of learning and the lack of effective supervision of student participation are the biggest challenges of using the platform for learning. Hani, Nedat A Bani (2014)¹⁴ conducted A quantitative quasi-experimental study on the influence of WhatsApp in improving students' vocabulary writing. Using the data collected from the pre-test and post-test, the analysis found that the application effectively promoted students' vocabulary selection and writing, and provided new ideas for educational reform. Malhotra, Dhiraj Kumar et al. (2017)¹⁵ studied the application of WhatsApp in medical students, and the study showed that WhatsApp is conducive to enhancing knowledge sharing and creativity among students, and will have a bright future in the academic world.

The above is the relevant research of domestic and foreign scholars on WeChat public platform and WhatsApp. They have achieved positive results and good influence in the theoretical and practical aspects such as the construction of the theoretical model of WeChat public platform and WhatsApp education and teaching and the targeted design and development of application platform. However, on the whole, the selected research object, the teaching field and the organizational design principles involved are still relatively simple, and the research is still in the primary stage. Therefore, the research on the WeChat public platform needs to be further strengthened.

2.3 Mobile learning – Domestic research review

In the research of "mobile learning", the earliest research in China started in 2000. International distance education at Desmond Keegan in Shanghai TV university anniversary conference titled as "from the remote learning to e-learning to mobile learning" report, the ministry of education issued the same year on "mobile education"

¹³ Aburezeq, Ibtehal Mahmoud; Ishtaiwa, Fawzi Fayeze. THE IMPACT OF WHATSAPP ON INTERACTION IN AN ARABIC LANGUAGE TEACHING COURSE[J]. International Journal of Arts & Sciences, (2013): 165-180.

¹⁴ Hani, Nedat A Bani . THE IMPACT OF WHATSAPP GROUP'S UTILIZATION ON EFL STUDENTS' VOCABULARY WRITING AMELIORATION[J]. International Journal of University Teaching and Faculty Development, 2014: 73-87.

¹⁵ Malhotra, Dhiraj Kumar; Bansal, Sonia. Magnetism of WhatsApp among veterinary students. The Electronic Library, 2017: 1259-1267.

theory and practice of research project notice, domestic mobile learning the curtain was opened.¹⁶

In the aspect of mobile learning theory, Ye Chenglin et al.(2004)¹⁷ defined the related concepts of mobile learning and mobile education, and analyzed the theoretical basis of mobile learning such as informal learning theory and situational cognitive learning theory. Wang Liqing et al.(2018)¹⁸ studied the design and development principles and development process of mobile learning resources, and analyzed the applicability and feasibility of mobile learning resources. Fang Haiguang et al.(2011)¹⁹ analyzed the theory and practice of mobile learning, and summarized four typical application modes of mobile learning system environment, emphasizing the advantages of mobile technology and the importance of mobile learning experience of learners.

In the aspect of mobile learning design, literature analysis shows that with the development and maturity of various educational technologies, contents related to mobile learning design increase year by year, mainly including learning resource design, learning framework design and learning platform design. From the perspective of mobile learning, Gu Xiaoqing et al.(2008)²⁰ combined the characteristics of adult learning and mobile tools, and put forward the micro-learning design scheme suitable for mobile learning from the aspects of curriculum design, media design and communication design. Zhu Xuewei et al.(2014)²¹ put forward the design principle and process of the mobile learning platform, built the learning platform based on WeChat, and took the course of "civil engineering construction" as an example to conduct an empirical study, proving that the mobile learning platform can effectively promote students' learning, and this new mobile learning approach has strong practical significance. Liu Yongchao(2015)²² from mobile learning the rationality of the model construction, applicable range and conditions, analyzes the mobile learning ability and habit, set the mobile learning content design principles and processes, research shows that the model is beneficial to the students' active learning and teachers' professional development and rational utilization of the model can help move at ordinary times is not conducive to learning tool to help students with learning tools.

¹⁶叶成林, 徐福荫, 许骏. 移动学习研究综述[J]. 电化教育研究.

¹⁷叶成林, 徐福荫. 移动学习及其理论基础[J]. 开放教育研究, 2004, (3):23-26.

¹⁸王梨清, 李红美. 基于微信公众平台的移动学习资源设计、开发及应用[J]. 现代教育技术, 2018, (6):67-72.

¹⁹方海光, 王红云, 黄荣怀. 移动学习的系统环境路线图[J]. 现代教育技术, 2011, (1):14-20.

²⁰顾小清, 顾凤佳. 微型学习策略: 设计移动学习[J]. 中国电化教育, 2008:17-21.

²¹朱学伟, 朱昱, 徐小丽. 微信支持下的移动学习平台研究与设计[J]. 中国远程教育, 2014(4):77-83.

²²刘永超. 基于微信公众平台移动学习模式的建构[J]. 课程教育研究, 2015:214-215.

2.4 Mobile learning –Foreign research review

The earliest research on mobile learning appeared in 1994 when Carnegie Mellon university in the United States carried out Wireless Andrew research project, which is the first mobile learning project in the world and belongs to the category of learning resource construction under the mobile learning environment.²³The project aims to provide teachers and students with high-speed wireless links covering the campus through the construction of wireless infrastructure. Sarrah, Mohamed et al. (2018)²⁴proposed a new model of education demand, which is used for the learning development and application of higher education. Yun-fang, Tu et al. (2018)²⁵ proposed potential applications and research directions of mobile learning supported by libraries, and provided insights related to mobile learning related to libraries. Solomon Sunday Oyelere et al. (2018)²⁶ used scientific research methods to develop mobile learning applications and put them into practical use in courses. Studies have shown that this application can easily access learning resources and effectively improve academic performance. Yang, Jie Chi et al. (2010)²⁷ developed and evaluated the interactive mobile learning environment, designed the mobile learning environment, conducted an empirical study, and conducted a questionnaire survey and test on students. The results confirmed the effectiveness of mobile learning.

Through the review of relevant researches on mobile learning at home and abroad, it can be found that most of them are macro in terms of theoretical research and rarely involve specific micro aspects. From the perspective of practical technology, the design of mobile learning resources is relatively arbitrary, the content of learning resources is relatively simple, and there is a lack of systematic teaching design. Therefore, it is necessary to strengthen the specific in-depth theory and systematic design of learning resources, enrich the content of mobile learning, improve the platform design, and promote the quality and rapid development of mobile learning.

²³洪园. 基于微信公众平台的学习资源建设行动研究[D]. 上海:上海外国语大学, 2016. 6.

²⁴ Sarrah, Mohamed; Al-Shihi, Hafedh; Al-Manthari, Bader; Bourdoucen, Hadj. Toward Educational Requirements Model for Mobile Learning Development and Adoption in Higher Education[J]. TechTrends, 2018: 635-646.

²⁵ Yun-Fang, Tu; Hwang, Gwo-Jen. Trends of library-associated mobile learning based on a review of academic studies published from 2007 to 2016[J]. The Electronic Library, 2018: 875-891.

²⁶ Solomon Sunday Oyelere; Suhonen, Jarkko; Wajiga, Greg M; Sutinen, Erkki. Design, development, and evaluation of a mobile learning application for computing education[J]. Education and Information Technologies, 2018: 467-495.

²⁷ Yang, Jie Chi; Lin, Yi Lung. Development and Evaluation of an Interactive Mobile Learning Environment with Shared Display Groupware[J]. Journal of Educational Technology & Society, 2010:195-207.

3 Relevant Theory

3.1 Connectivism Theory

The Connectivism Theory was proposed by George Siemens in 2005. He pointed out that learning is no longer an activity of one person, but a process of connecting specialized nodes and information sources. Unicom learning theory is the web 2.0 and social media technology and knowledge update speed under the background of rising of important learning theory, put forward from a new perspective to explain open, complex and rapidly changing era of information explosion, learn how to problems, due to fit into the current era characteristics and knowledge characteristics and has received the widespread attention of the international community.²⁸

The connectionism learning theory provides the theoretical basis for the interactive learning based on the WeChat public platform, which makes the learning turn from individual learners to the network formed by the combination of learners, educational media and educators, and promotes the diversity and comprehensiveness of learning.

3.2 Informal learning theory

Informal learning theory is put forward by American adult educators, which defines informal learning mainly by comparing it with formal learning. Formal learning mainly refers to the education in school, while informal learning refers to the learning that takes place in the time and place of informal learning such as work, life and social contact, through non-teaching social communication to transfer and infiltrate knowledge, and is self-initiated, self-regulated and self-responsible by learners.²⁹

Informal learning theory provides a theoretical basis for learners to learn anytime and anywhere, and provides learners with required knowledge and ability through informal learning environment.

²⁸王志军, 陈丽. 联通主义学习理论及其最新进展[J]. 开放教育研究, 2014 (5): 11-27.

²⁹张娜娜, 常海洋. 非正式学习理论及其对我国成人教育的启示[J]. 2016 (4): 17-22.

4 WeChat public platform construction

4.1 Content Design

Automatic reply setting

Through the application of the premise WeChat public platform, I registered a WeChat public account named "language learning support", expecting to improve the language learning ability of students, improve the communication ability of parents and children and promote the improvement of intimate relationship through the auxiliary role of family education. After following the public account, the system will reply automatically, as shown in figure 1.

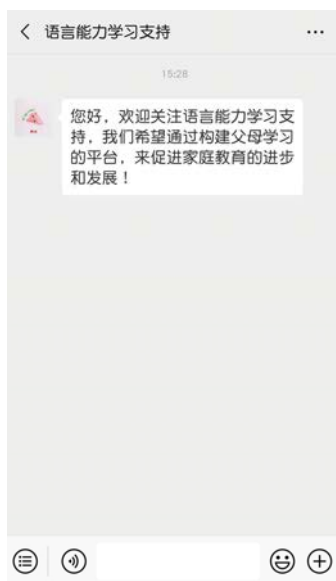


Fig. 1. WeChat public platform interface.

Customized menu function design

After the investigation and interview of students and parents, this study designs three parts, including educational psychology, learning support and offline classroom. The educational psychology module mainly introduces the psychological characteristics of students at different stages to parents and deepens parents' education on children from the perspective of emotion. It also includes five sub-modules, including psychological development characteristics, educational tips, heart-warming stories, what mom wants to tell you and popular books on family education (as shown in figure 2). The main purpose of the learning support module is to improve students' language learning

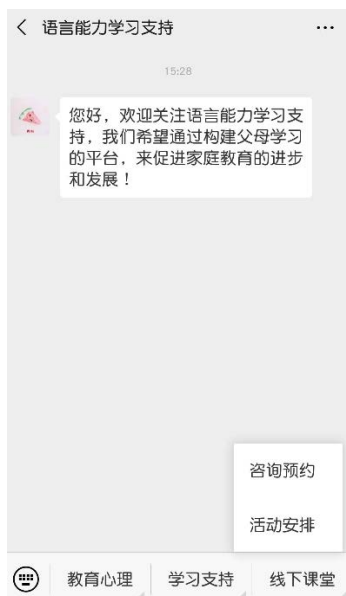


Fig. 4. The third menu.

4.2 Interactive mode

There are various forms of interaction based on WeChat public platform, including online interaction such as message leaving and sending messages to the background, as well as offline interaction through activities and consultation of "offline classroom" module. This platform is not limited to the interaction between parents and the platform. Through parents' learning on the platform, there will be a certain interaction between parents and children. At the same time, parents will give feedback and Suggestions to the platform through children's performance, thus forming a two-way or multiple interactive activities and constantly promoting the development and improvement of the platform.

ability through parental supervision and help. It also includes three sub-modules, namely daily practice, happy video and audio, and recommendation of excellent children's books (as shown in figure 3). Offline class mainly provides offline auxiliary support, including two modules of consultation appointment and activity arrangement (as shown in figure 4).



Fig. 2. The first menu.

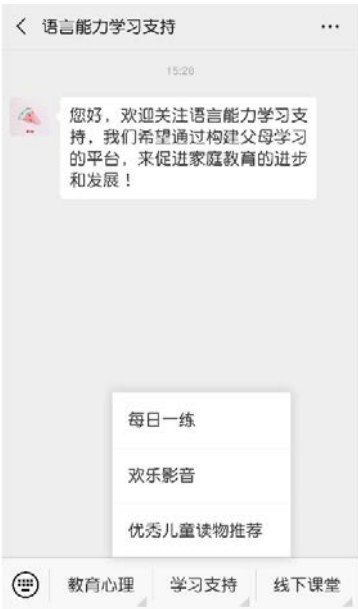


Fig. 3. The second menu.

5 Conclusion and discussion

This study aims to understand the current research situation by sorting out and analyzing the existing relevant literature, and then build a WeChat public platform suitable for promoting the development of family education, so as to promote the development of students' learning ability and improve the communication mode and intimate relationship between parents and children through the effective use of this platform. However, due to time constraints, no empirical study has been conducted and the public platform has not been put into practical use, so its effect cannot be confirmed. However, through previous literature analysis and theoretical research, it can be proved that this platform is helpful in improving students' ability and parent-child relationship. It is hoped that this study can provide new ideas for the development of family education in China.

References

- 白浩, 郝晶晶. 微信公众平台在高校教育领域中的应用研究[J]. 中国教育信息化, 2013, (4): 77-81.
- 陈雪梅. 微信支持下的微课学习平台关键技术及实现[J]. 教育现代化, 2018, (17): 134-137.
- 方海光, 王红云, 黄荣怀. 移动学习的系统环境路线图[J]. 现代教育技术, 2011, (1): 14-20.
- 付志文, 彭蕾. 微信教学 APP 的设计与实现[J]. 中国教育技术装备, 2017: 35-40.
- 顾小清, 顾凤佳. 微型学习策略: 设计移动学习[J]. 中国电化教育, 2008: 17-21.
- 洪园. 基于微信公众平台的学习资源建设行动研究[D]. 上海: 上海外国语大学, 2016. 6.
- 李贵, 费星红, 陶平. 基于微信公众平台的课堂教学管理系统开发[J]. 现代教育技术, 2017, (6): 108-114.
- 刘华, 敖谦. 基于微信公众平台的混合式教学——以“网线制作六步法”课程为例[J]. 现代教育技术, 2017, (1): 48-54.
- 刘永超. 基于微信公众平台移动学习模式的建构[J]. 课程教育研究, 2015: 214-215.
- 孟凡立, 陈琳. 基于微信公众平台的移动学习空间构建研究[J]. 现代教育技术, 2014, (10): 19-25.
- 田玉琴, 吴成巍, 贾玉洁. 微信公众平台下成人移动学习空间构建[J]. 中国成人教育, 2018: 21-23.
- 王萍. 微型移动学习的支持功能与设计原则分析[J]. 远程教育杂志, 2013: 34-41.
- 王萍. 微信移动学习平台建设与应用[J]. 现代教育技术, 2014, (5): 88-95.
- 王梨清, 李红美. 基于微信公众平台的移动学习资源设计、开发及应用[J]. 现代教育技术, 2018, (6): 67-72.
- 王志军, 陈丽. 联通主义学习理论及其最新进展[J]. 开放教育研究, 2014 (5): 11-27.
- 谢印芬. 基于微信公众平台的碎片化学习模式研究[J]. 教育现代化, 2018: 128-129.
- 闫英琪. 微信支持下的移动学习活动设计与实证分析——以“VF 程序设计”课程为例[J]. 电化教育研究, 2016: 88-94.
- 叶成林, 徐福荫, 许骏. 移动学习研究综述[J]. 电化教育研究.
- 叶成林, 徐福荫. 移动学习及其理论基础[J]. 开放教育研究, 2004, (3): 23-26.

- 张娜娜, 常海洋. 非正式学习理论及其对我国成人教育的启示[J]. 2016 (4) :17-22.
- 朱学伟, 朱昱, 徐小丽. 微信支持下的移动学习平台研究与设计[J]. 中国远程教育, 2014(4) :77-83.
- Aburezeq, Ibtehal Mahmoud; Ishtaiwa, Fawzi Fayez. THE IMPACT OF WHATSAPP ON INTERACTION IN AN ARABIC LANGUAGE TEACHING COURSE[J]. International Journal of Arts & Sciences, (2013): 165-180.
- Hani, Nedal A Bani . THE IMPACT OF WHATSAPP GROUP'S UTILIZATION ON EFL STUDENTS' VOCABULARY WRITING AMELIORATION[J]. International Journal of University Teaching and Faculty Development, 2014: 73-87.
- Malhotra, Dhiraj Kumar; Bansal, Sonia. Magnetism of WhatsApp among veterinary students. The Electronic Library, 2017: 1259-1267.
- Sarrab, Mohamed; Al-Shihi, Hafedh; Al-Manthari, Bader; Bourdoucen, Hadj. Toward Educational Requirements Model for Mobile Learning Development and Adoption in Higher Education[J]. TechTrends, 2018: 635-646.
- 875-891.
- Solomon Sunday Oyelere; Suhonen, Jarkko; Wajiga, Greg M; Sutinen, Erkki. Design, development, and evaluation of a mobile learning application for computing education[J]. Education and Information Technologies, 2018: 467-495.
- Yun-Fang, Tu; Hwang, Gwo-Jen. Trends of library-associated mobile learning based on a review of academic studies published from 2007 to 2016[J]. The Electronic Library, 2018:
- Yang, Jie Chi; Lin, Yi Lung. Development and Evaluation of an Interactive Mobile Learning Environment with Shared Display Groupware[J]. Journal of Educational Technology & Society, 2010:195-207.