Effects of the Application of Mobile Learning to Criminal Law Education on Learning Attitude and Learning Satisfaction

Yang Li 1*
1 Law School, Minzu University of China, Beijing, CHINA

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ABSTRACT
Changeable technology products have mobile technology be broadly applied to various fields to change people’s behaviors as well as learning styles. The trend of mobile learning would greatly change teachers’ teaching styles and learners’ learning modes. Requirements for legal personnel are not simply in the judicial, units in the society have the requirements for the establishment of relevant legal systems as the rule of law order in society is not simply the responsibility of judges. Criminal law education in colleges therefore should aim to cultivate law profession with mission and justice personality and being able to contribute to the society. Taking a university in Beijing as the research object, 16-week experimental research (3hr per week for total 48 hours) on students of a department of the university is proceeded. The research results show significantly positive effects of 1. mobile learning on learning attitude, 2. learning attitude on learning satisfaction, and 3. mobile learning on learning satisfaction. Suggestions according to the results are proposed, expecting to enhance students’ self-learning efficacy and learning satisfaction through the convenience and immediacy of mobile learning, and more importantly to promote students’ learning attitudes towards law education.

Keywords: mobile learning, criminal law education, learning attitude, learning satisfaction, criminal law amendment

INTRODUCTION
With changeable technology products, mobile technology is broadly applied to various fields as banks, economic tourism, and data search in entertainment libraries. It changes people’s behaviors as well as learning styles. The technological equipment of mobile devices contains Internet, computer multimedia interaction video, and distance learning, which are important tools for learning. The combination of such digitalization to form new teaching materials, through immediate experience interaction of computer technology and situational teaching contents, expands the learning field no longer being restricted to classrooms. Due to the maturity of broadband network technology and environment, traditional teaching styles are extended to the equipment at the network end, without being restricted to time and space. Moreover, the development of wireless communication technology allows expanding the practice of education and students’ learning places to mobile time and space points which could not be reached with original wired network. It would greatly change the restrictions of learning environment and gradually set up the possibility of future learning classrooms. Furthermore, matching with currently complete e-learning materials and mobile personal wireless equipment, the trend of mobile learning would largely change teachers’ teaching styles and learners’ learning modes.

Regarding “criminal law education”, basic law courses of brief introduction to criminal law or brief introduction to civil law and brief introduction to commercial law, i.e. “college general law education”, are arranged in departments beyond department of law in colleges. It aims to cultivate students’ concepts of law. This study focuses on the cultivation of criminal law education in colleges. It would be paranoid to set the goal of criminal law education in colleges as the cultivation of excellent judges and lawyers. It is not merely the judicial requiring for legal personnel, but units in the society have the requirements for the establishment of relevant legal systems, as it
is not simply judges’ responsibility to maintain rule of law order in the society. The goal of criminal law education in colleges therefore should cultivate law profession with mission and justice personality, and being able to contribute to the society. The instruction of criminal law knowledge should not be restricted to the subjects for occupational examinations, but should train students, based on criminal law, being able to integrate criminal law data with keen and deepening methods and to solve problems through history, philosophy, society, economic basis, and correlations. Inquiry method for criminal law education allows students proceeding criminal law education and understanding criminal law amendment with mobile devices. Integrating criminal law education into mobile learning, students’ self-learning efficacy and learning satisfaction could be enhanced through the convenience and immediacy of mobile learning. More importantly, students’ learning attitudes towards criminal law education could be promoted.

LITERATURE AND HYPOTHESIS

Criminal Law Amendment


Criminal law amendment aims to punish criminals destroying the economic order in the socialism market and guarantee the socialism modernization going well. Amendment to the Criminal Law of the People’s Republic of China (10) was passed at the 30th conference of the 12th National People’s Congress Standing Committee of People’s Republic of China on November 4th, 2017, and was hereby announced and practiced.

To punish criminal behavior of insulting national anthem and to practically maintain the seriousness of singing and using national anthem and national dignity, the second clause is added in Article 299 as

(1) “Whoever desecrates the National Flag or the National Emblem of the People’s Republic of China by intentionally burning, mutilating, scrawling on, defiling or trampling upon it in a public place shall be sentenced to fixed-term imprisonment of not more than three years, criminal detention, public surveillance or deprivation of political rights.

(2) “Those who deliberately alter the lyrics or the score of the national anthem of the People’s Republic of China, or perform or sing the national anthem in a deliberately distorted or derogatory manner, or insult the national anthem in any other manner, in a public venue, where the circumstances are serious, are sentenced in accordance with the provisions of the previous paragraph [i.e., sentenced to fixed-term imprisonment of up to three years, short-term detention, controlled release, or deprivation of political rights.”

Mobile Learning

Hawks (2014) simply explained mobile learning as applying mobile elements to e-learning so that learners could complete the learning with personal handheld devices. Abdullah and Ward (2016) defined mobile learning as proceeding electronic learning activity through the assistive devices of mobile devices, such as personal digital assistant and mobile phone. The so-called mobile assistive devices could be tablet PC, smart phone, pocket PC, personal digital assistant (PDA), Notebook, or any assistive devices or devices which could load digital information contents. In this case, whatever could cross the limits of time and space could be regarded as a kind of mobile learning. Lai and Hwang (2015) indicated that, in comparison with conventional instruction, learners in such mobile learning environment could active inquire, interact online, learn with scaffolding guidance and active inquiry, as
well as timely engage in learning related activity (Baek, Zhang, & Yun, 2017). In other words, learners could
download data with personal learning devices from providers, through wired or wireless networks, so that learners
could utilize trivial time in life for the instant learning, e.g. commuting and waiting time of general office workers
or students, during walking or exercising (Oryina & Adodolapo, 2016).

Referring to Chang et al. (2016), mobile nature contains convenience, expediency, and immediacy.

(1) Convenience: Providing learners with digital information and materials and assisting learners in acquiring
knowledge through the service or equipment without being restricted to time and location.

(2) Expediency: It is a teaching strategy to achieve learners’ self-construction through teaching design suitable
for learners’ ability, knowledge, and styles and guiding personal learning.

(3) Immediacy: Mobile learning, with devices, allows mutual communication of contents anytime anywhere
through wireless network technology and learning platforms.

Learning Attitude

He, He, Cai, and Fang (2016) indicated that students’ preference for learning situations would affect the learning
attitude and further influence the learning effect. In order to achieve teaching effectiveness, teachers therefore had
to treat students with warm, concerning, and positive attitudes as well as guide and cultivate the positive learning
attitudes. Chu and Chen (2016) stated that learning attitude was students’ attitudes towards school work and
students’ self-opinions resulted from the attitudes towards learning environment. Mosher (2016) also indicated that
learning attitude was the persistent and consistent positive or negative psychological state of affective, cognitive,
and behavioral learning content, environment, and process generated by learners, through personal experience and
the influence of external environment, to reflect on the positive or negative performance of learning behavior. Qin,
Zheng, and Li (2014) proposed learning attitude as learners presenting agreement or opposite action tendency on
the cognition, situation, and comprehension of learning activity. Azeiteiro, Bacelar-Nicolau, Caetano, and Caeiro
(2015) regarded learning attitude as learners’ emotional tendency and the feeling about learning professional
knowledge that teachers’ teaching styles would affect learners’ learning attitudes. Tully (2015) covered reading,
notes, abstract, memory, preview, problem-solving, and time use as the elements of learning attitude, referring to
the attitude towards school curricula, environment, teachers, classmates, and ego.

Referring to Lin et al. (2016), learning attitude is divided into two dimensions in this study.

(1) Intrinsic motivation: covering factors of learners’ personal needs, desire, impulse, affection, and emotion.
The so-called intrinsic motivation was the motivation involving in work to acquire the senses of achievement
and satisfaction from the value of the work.

(2) Extrinsic motivation: including factors of incentive, objective, interests, and ambition. The so-called extrinsic
motivation referred to involving in work for the benefits irrelevant to the value of the work (e.g. return,
appraisal, and order).

Learning Satisfaction

Safari, Safari, and Hasanzadeh (2015) considered that the closer relationship between teachers and students
would enhance students’ satisfaction with teachers and the better curriculum content conforming to students’
learning needs and interests could better promote students’ learning satisfaction. Bedel (2015) pointed out learning
satisfaction as the feeling about and attitude towards learning process; such feeling and attitude were formed by
students’ perceived pleasure in the learning activity or the learning process satisfying the physiological and
psychological needs. Nelosn (2016) regarding learning satisfaction as good perception and positive attitude caused
by learning activity being able to satisfy individual needs, i.e. learners being able to perceive learning activity
satisfying personal learning needs in the learning process. Shukla and Dixit (2015) also proposed that learning
satisfaction was students’ feeling and attitudes, during or after learning, resulting in the pleasant or positive
attitudes in mind; on the contrary, being unpleasant or appearing negative behavior in mind revealed the
dissatisfaction. Bhaskaran and Swaminathan (2014) pointed out students’ learning satisfaction as students’
attitudes towards and feeling about various learning activities in the learning process being able to present
students’ preference for the learning activities.

Referring to Tseng et al. (2016), curriculum content, teaching style, and learning styles are used for measuring
learning satisfaction in this study.

(1) Curriculum content: new knowledge in curricula, helpful contents, rich courses, and diverse courses.

(2) Teaching style: assignment evaluation, multimedia teaching styles, teaching activity in courses, and lively
teaching styles.
(3) Learning styles: interface operation, home learning, learning time control, and repeatedly viewing course contents.

**Research Hypothesis**

Waheed, Kaur, Ain, and Sanni (2015) indicated that mobile learning aimed to improve the incomplete defects of conventional instruction and add virtual reality technology to enhance students' learning attitude and motivation for students finding out coherent information in the situation to deepen the impression and association abilities as well as acquiring knowledge anytime anywhere with the assistance of ubiquitous context-aware learning systems. Arif et al. (2015) mentioned that teachers being familiar with the functions of digital devices and digital platforms could design mobile learning courses to induce students' active learning attitudes, enhance the learning efficiency, and promote the problem-solving ability. Mobile learning was the learning style with portable technology assisting students in effective learning or promoting learning attitude in the learning process. Hwang, Lai, and Wang (2015) discovered that mobile learning could enhance learning attitude, learning motivation, and learning achievement.

Research showed that mobile learning model should take learning process in authentic environment into account and combine proper learning strategies or design learning activity to achieve the ideal knowledge construction. Accordingly, the following hypothesis is proposed in this study.

**H1:** Mobile learning presents significantly positive effects on learning attitude.

Research on the relationship between students’ learning attitude and learning satisfaction, learning performance in network teaching (Yang et al., 2015) revealed that students with more network experiences in thinking and analysis presented higher learning satisfaction and learning performance and were gladder to learn the network teaching courses. In other words, the better learning attitude towards network courses would appear higher learning satisfaction. Dai (2015) regarded the positive correlation between learning attitude and professional growth in professional continuation education. That is, the higher situation of nursing staff participating in continuation education would show the better professional performance; the more rewards offered by the served units would enhance the learning attitude, revealing certain degree of satisfaction of learners. Zuber (2016) proved the remarkable correlations between learning attitude and learning satisfaction of students in computer-aided design course. Hwang and Wu (2014) proposed the notably positive correlation between learning attitude and learning satisfaction of vocational high school students in the teaching cooperation. The following hypothesis is therefore proposed in this study.

**H2:** Learning attitude shows remarkably positive effects on learning satisfaction.

Zhou (2016) pointed out the easy operation of mobile learning in which people could access to network information through network service to facilitate the learning and enhance students' learning motivation and learning satisfaction. Johnson et al. (2015) explained that mobile learning, with the distance real-time guiding system developed in mobile phones, could instantaneously provide learning instruction and assistance aiming at the problems or difficulties in students' learning process to enhance the learning satisfaction and learning effectiveness. Lin et al. (2016) mentioned that mobile learning could provide learning resources anytime anywhere and enhance the effectiveness of situational learning and experiencing learning to effective promote students’ learning satisfaction and learning effect and achieve the ubiquitous learning. Ray and Chakrabarti (2016) pointed out mobile learning as the learning with personal mobile handheld devices that learners in mobile learning environment could engage in learning activities anytime anywhere to effectively enhance learning efficiency and learning satisfaction. For this reason, the following hypothesis is proposed in this study.

**H3:** Mobile learning reveals notably positive effects on learning satisfaction.

**SAMPLE AND MEASUREMENT INDICATOR**

**Research Sample and Object**

Taking a university in Beijing as the research object, 16-week experimental research (3hr per week for total 48 hours) is applied to the students in a department. The retrieved questionnaire is analyzed the data with LISREL.

**Reliability and Validity Test**

The questions in this study are referred to domestic and international researchers’ research questions that the questionnaire presents certain content validity. Mobile learning, learning attitude, and learning satisfaction in this study are tested the overall structural causality. The Linear Structural Relations Model analysis results reveal that the overall model fit achieves the rational range with favorable convergent validity and predictive validity. Item-to-total correlation coefficient is utilized for testing the construct validity of questionnaire contents in this study.
i.e. reliability analysis. The acquired item-to-total correlation coefficients are used for judging the questionnaire contents. The item-to-total correlation coefficients of the dimensions in this study are higher than 0.7, showing certain construct validity.

Reliability analysis is further proceeded to understand the reliability of the questionnaire. The formal questionnaire is developed according to the standards, and the measured Cronbach’s α reliability coefficients appear in 0.70~0.90, obviously conforming to the reliability range.

**ANALYSIS OF EMPIRICAL RESULT**

**LISREL Evaluation Indicator**

LISREL (linear structural relation) model, containing factor analysis and path analysis in traditional statistics and adding simultaneous equations in econometrics, could calculate multi-factors and multi-causal paths. The model fit is evaluated with preliminary fit criteria, overall model fit, and fit of internal structure of model.

The data in this study are organized as below. Preliminary fit criteria, overall model fit, and fit of internal structure of model are further explained as followings.

From **Table 1**, the dimensions (convenience, expediency, immediacy) of mobile learning reach significant explanations of mobile learning ($t>1.96$, $p<0.05$), two dimensions (intrinsic motivation, extrinsic motivation) of learning attitude achieve remarkable explanations of learning attitude ($t>1.96$, $p<0.05$), and three dimensions (curriculum content, teaching style, learning styles) of learning satisfaction reach notable explanations of learning satisfaction ($t>1.96$, $p<0.05$). Apparently, the overall model in this study shows favorable preliminary fit criteria.

From **Table 2**, mobile learning shows positive and significant correlations with learning attitude (0.841, $p<0.01$), learning attitude reveals positive and remarkable correlations with learning satisfaction (0.872, $p<0.01$), and mobile learning appears positive and notable correlations with learning satisfaction (0.866, $p<0.01$) that H1, 2, and 3 are supported.

**Table 3** shows that the overall model fit standards $\chi^2$/DF=1.914, smaller than the standard 3, and RMR=0.009 that both $\chi^2$/DF and RMR are appropriate. Moreover, chi-square value is sensitive to sample size that it is not suitable for directly judging the fit. However, the overall model fit standards GFI=0.976 and AGFI=0.915 are higher than the standard 0.9 (the closer GFI and AGFI to 1 revealing the better model fit) that this model presents good fit indicators.
CONCLUSION

The research results reveal remarkably positive effects of mobile learning on learning attitude and learning satisfaction. In this case, a school could reinforce the application of mobile learning, e.g. broadening the coverage of digital environment on campus and strengthening the signals to prevent students from reducing the e-learning learning attitude and learning satisfaction due to interruption. A school with broader and more complete e-learning equipment and environment could offer more e-learning courses for teachers involving in the supplement and production of e-learning materials. Students with higher satisfaction with the quality of network systems and learning conditions would perceive better convenience of the teaching platform. The effect of learning attitude on learning satisfaction reveals that students with good learning attitudes could enhance the learning satisfaction with criminal law learning. In this case, students with better attitudes would present better learning satisfaction and effectiveness. Apparently, mobile learning devices could lead the learning of criminal law education and allow students collecting data for criminal law education. Mobile devices are equipped applications with diverse and strong functions, with which students could collect data and integrate knowledge for criminal law education and immediately understand the latest information of criminal law amendment for the criminal law learning. The learning activity therefore becomes seamless learning mode combining authentic environment with learning contents to enhance the goal of putting learning into practice.

RECOMMENDATIONS

By organizing the results and findings in this study, practical suggestions are proposed as below.

1. Schools should wiring the network in various departments and guarantee the speed of network bandwidth, the complete coverage and intensity of wireless signals. After all, it is the basic gate for students entering digital learning mode. Academic Affair Office should continuously reward teachers for the production of digital materials and those properly uploading course related digital data, as these would rich the mobile learning contents. Such environment and contents would stimulate students’ learning motivation and attitudes for better learning satisfaction.

2. Education units should stress on the promotion of teachers’ professional capability of criminal law, continuously plan systematic study, according to teachers’ needs and development goal and aiming at teachers of criminal law education, regularly proceed teachers’ criminal law empowerment courses, or provide teachers with short-term study on criminal law related courses to present two-way communication and supplement teachers’ inadequate criminal law profession. By shortening the distance between teaching theories and practice, it is expected that teachers could present higher energy on the criminal law professional development.

3. Currently, schools promote teachers’ professional growth by the participation in dialogue and discussion, presentation of teaching outcomes, on-campus teaching observation, and guidance from experts and researchers, revealing that schools have held activities related to criminal law professional growth for teachers. In terms of the effectiveness evaluation of criminal law education mobile learning practice, schools focus on the participation in action research, learning outcome presentation, or on-campus observation. Some schools would collect feedback through questionnaire survey. However, there is not a complete assessment mechanism to thoroughly grasp the teaching effectiveness of criminal law education mobile learning and the revision direction. It is suggested that schools should establish observation and evaluation assessment systems for teachers making progress on the criminal law education mobile learning courses.

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