

Development of an Online Learning to Enhance Critical Thinking on Violence Prevention for Adolescents

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Abstract: The aims of this research are as follows: (1) to develop an online learning lesson to enhance critical thinking skills about violence, (2) to study the results of using developed online lessons; and (3) to propose guidelines for disseminating developed online lessons to strengthen their critical thinking skills against adolescent violence. The research instruments consisted of an interview form, a critical thinking assessment test, a satisfaction questionnaire, and connoisseurship seminar issues. The data were analyzed in terms of percentage, mean, standard deviation, t-test, and content analysis. With regard to the research outcomes, the online lesson was developed from situations, texts, conversations, questions, images, poems, storybooks, and charts. The developed lesson was both consistent and appropriate for strengthening critical thinking skills regarding adolescent violence. After the lesson trial, the critical thinking skills of sampled adolescents against violence was higher than before at a statistically significant level of .05. The sample was satisfied with the online lesson at a high level overall. Regarding the dissemination, it was suggested that the development of online lessons for all age groups should be publicized in educational institutions, government or private agencies, as well as a wide range of media.

Keywords: Online lessons, Critical thinking, Violence, Adolescents

Introduction

Violence has long been a problem. Victims of violence normally are women and children. Violent situations often start for various reasons, including interpersonal communication, verbal communication or facial expressions and gestures, both intentionally and unintentionally. Avoiding violent situations is therefore necessary and helps reduction of violence against adolescents. Studies have shown that there are many risk factors that cause violence, and the ability to avoid violent situations can be developed and learned for more efficient violence prevention. At present, violent situations tend to intensify, especially in vulnerable or disadvantaged groups such as children, women, the elderly, and the poor. They are often subjected to forced treatment and beatings, actions that cause emotional and psychological harm, i.e., insulting expressions or gestures, cynical remarks, profanity, and sexual violence, i.e., obscenity, vulgarity, molestation, and sexual assault. Other potential violence includes financial exploitation, labor exploitation, and prostitution. Violence in society can be found in families, schools, and workplaces. Statistically, adolescent violence in Thailand was frequently found among teenagers between the ages of 15 and 18. Violence prevention, therefore, should be focused on children before the age of 15 which is the preparation period for adolescence. According to Morin & Forman (2019), tweens, aged between 10-12, are no longer little kids, but not quite teenagers yet. At this age of puberty, they experience significant physical and emotional changes and begin to develop their identity to fit into society. It is an important age to promote the role of living with others appropriately in society. This research is preventive research for violence, the researchers, therefore, determined the scope of the population as teenagers aged 11-15, who are puberty and considered in the pre-violent age.

The current trend of global education is the driving speckle of the concept of 21st-century skills. Many thinker groups analyzed the skills and categorized them into 7 main groups (Conklin, 2012, p. 25). Critical thinking and problem-solving are among the top skills required for students. Critical thinking refers to a rational thought process based on the

study of facts, evidence, and information to support decision-making. Specifically, reasonable analysis is conducted before deciding what to believe or not. Apart from skills needed for students, the current education also points out to online learning format. From studying the concept of online lesson development and motion infographics, it was found that online lessons in motion infographic format are innovative learning management that combines imagery, cartoons, graphs, shapes, lines, texts, and other elements to create lessons that correspond to learners' learning habits. Motion infographics visualize information and tell stories interestingly and efficiently with animated objects. When applying to learning management, they help motivate students' learning and create fun lessons. The violence behavior modification in this research is developed by online learning that integrate critical thinking which is key concept in this research. In this research, therefore, the online lesson to enhance critical thinking skills were developed in an electronic format with critical content using cartoon animation and motion infographics. The characters and setting were created corresponding to the selected content and theme which derived from situations, texts, dialogues, questions, images, poems, storybooks, and charts. The objectives of research were 1) To develop online lessons to enhance critical thinking skills against adolescent violence. 2) To study the results of using online lessons to enhance critical thinking skills against adolescent violence. 3) To suggest guidelines for publicizing lessons online to enhance critical thinking skills against adolescent violence.

Research Methodology

Sampling

The sample in the research comprised 12 informants for interviewing derived by purposive selection, 40 students of educational opportunity extension schools under the Nakhon Pathom Primary Educational Service Area Office obtained from multi-stage sampling, and 10 experts derived by purposive selection.

Data Collection

Phase 1 of the development process of the online learning lesson to enhance critical thinking on violence prevention for adolescents consisted of a documentation review of academic treatise and research concerned with online learning and critical thinking on violence prevention, and interviews of stakeholders and experts. After that, the researcher analyzed data from the documentation review and the interview for making the conceptual framework for constructing and developing an online learning lesson to enhance critical thinking on violence prevention for adolescents. The online learning lesson to enhance critical thinking on violence prevention for adolescents consisted of 8 lessons which were presented in motion infographic style, including lessons from situations, text, dialogues, questions, images, poems, storybooks, and charts. The lessons were presented to 5 experts for being evaluated the propriety and congruency of content to enhance critical thinking on violence prevention for adolescents. Phase 2 of the development process of the online learning lesson to enhance critical thinking on violence prevention for adolescents was concerned with the effect of online learning to enhance critical thinking on violence prevention for adolescents. The developed lessons were tried out with 40 adolescents who were a non-target group. After that, the researcher improved and completed the developed online learning to enhance critical thinking on violence prevention and presented the benefits of online lessons. The research instruments include an interview form, a test of critical

thinking skills against violence, a satisfaction questionnaire, and a connoisseurship seminar. Specifically, the critical thinking test was designed with four-choice situational questions that can measure four critical thinking skills— defining the problem, evaluating data, identifying assumptions, and making conclusions. The test comprised 40 items with a difficulty value between 0.42-0.76, a discrimination value between 0.25-0.66, and a reliability value of 0.93. The satisfaction questionnaire was constructed as a five-rating scale ranging from most to least satisfaction with a discrimination value between 0.22-0.68 and a reliability value of 0.88. Data were analyzed with percentage, mean, standard deviation, t-test, and content analysis.

Research results

1. The developed online lessons to enhance critical thinking skills against adolescent violence comprise lessons from situations, text, dialogues, questions, images, poems, storybooks, and charts. The content integrated critical thinking skills towards violence, including 1) defining the problem, 2) evaluating data, 3) identifying assumptions, and 4) making conclusions. The characters in the lessons were made animated in motion infographic format. They communicate via e-mail. Consequently, the developed online lessons are consistent and appropriate for enhancing critical thinking skills against adolescent violence and they are of good quality.

2. The result of using online lessons to enhance critical thinking skills against adolescent violence is presented in Table 1.

Table 1 A comparison of critical thinking skills against adolescent violence before and after learning with the online lessons (40-point full score) (n = 40)

Testing	\bar{x}	S.D.	\bar{d}	$S.D.\bar{d}$	t
Before learning with the online lessons	13.75	2.43	16.45	0.61	27.17*
After learning with the online lessons	30.20	2.86			

*p<.05

Table 1 indicates that the sampled students' critical thinking skills against violence before and after learning are significantly different. After learning with the online lessons, students have a higher level of critical thinking skills against violence than before with statistical significance at the level of .05. Additionally, the mean score of critical thinking skills against violence after learning with the online lessons was found at 76 percent of 40 points.

3. Overall, the students are highly satisfied with the online lessons to enhance their critical thinking skills against violence (\bar{x} =4.35). Specifically, the aspect of benefit of the online lessons was found at the highest level (\bar{x} = 4.54), while the functionality (\bar{x} = 4.34) and content of the online lessons (\bar{x} = 4.16) were at a high level.

4. The online lessons to enhance critical thinking skills against adolescent violence are very helpful because the content about adolescent violence is an important issue in society that should be focused on and taken care of. Additionally, the online lessons are aligned with the competency-based curriculum. The dissemination of lessons is very feasible and can be made widely available in Thai society because of their useful and up-to-date content and effective conveying strategies. The online lessons use animation to clarify the lessons which attract learners' interest and motivate their learning. Furthermore, these developed lessons

promote self-learning, which students can learn by themselves from anywhere and at any time. In conclusion, the online lessons to enhance critical thinking skills against adolescent violence should be publicized through school networks and educational authorities, government or private agencies. It is suggested to disseminate the lesson to all age groups, not limited to 11-15-year-old teenagers. The publication should be on a variety of media with clear search keywords. The online lessons should be integrated with classroom learning activities with a teacher as a learning promoter, a mentor, or an advisor. Finally, the developed lessons should be applied as appropriate and should be expanded to cover all areas.

Discussion

As a result of the development of online lessons to strengthen critical thinking skills against violence, the researcher proposes discussions as follows:

1. According to the research, the online lessons to enhance critical thinking skills against adolescent violence consist of lessons from situations, texts, dialogues, questions, images, poems, storybooks, and charts. They are consistent with and appropriate to the enhancement of critical thinking skills against adolescent violence with good quality (coefficient of variation below 10%). These online lessons to enhance critical thinking skills against violence were developed using the concepts of infographic motion, critical thinking, adolescent behavior, behavioral modification and violence, research and development of online lessons, and satisfaction. Consequently, these online lessons are modernized in response to the needs and preferences of teenagers. In addition, the lessons allow learners to learn autonomously. Each lesson begins with a warm-up, and follows by a lesson supporting violence-free, a lesson summary, and a reviewing exercise. This is consistent with the research findings of van den Berg (2020, pp. 223-236), who conducted research on the important contexts of the students' experience in open distance learning. The research mainly aimed at describing students' experience towards online course learning which the results can be applied to develop effective online courses. The connectivism research paradigm was used as a framework with the assumption that learning takes place by means of interactions. The research sample was students with experiences of a first-year fully online course and the data collection instrument was the open-ended and close-ended questionnaire. The results showed that students were positive about the open distance education and one of the important factors in effective online learning was providing students with convenience and flexibility regarding the time and location to gain knowledge. It also concluded that, in designing effective online learning courses, instructors need to take students' different contexts into consideration to ensure their optimal benefits. As a result, these online lessons to enhance critical thinking skills against violence are developed as an open online course that learners can learn by themselves. Students are able to choose the lessons they prefer to start, no need to follow the order. The students, therefore, are motivated in learning, and the possibility to develop critical thinking skills against violence increases. Furthermore, the development of online lessons to enhance critical skills against adolescent violence is in line with Akatsuka's research (2020, pp. 95-113) about promoting critical thinking skills in an online environment. It examined the effects of an approach that promotes critical thinking skills of English as a foreign language (EFL) learner in online contexts. The participants were 31 Japanese undergraduate students enrolled in an online EFL course. The results indicated that students could interact in online

environments as in face-to-face settings. The students' development in critical thinking was found regardless of their different English proficiency levels; however, students' English proficiency level could affect their resistance to answer higher-order thinking-level questions in an online setting. Therefore, students should be offered formal and informal interactive opportunities to answer questions involving higher-order thinking skills among peers. According to the research papers mentioned above, a practical online lesson to improve critical thinking skills should enable learners to study by themselves interactively. As Maxfield (2020, pp. 91-94) discussed the success of feedback giving in the age of online lessons, he stated that feedback timing and content should be reassessed. When learning management is moved to online platforms, feedback is, therefore, necessary to adapt to suit the changing context as well. He mentioned three questions about feedback that should be considered: why, how, and when. For online lessons, the feedback is required to be attractive and purposive. The forms of feedback are verbal feedback, teacher demonstration, biofeedback visualization, and summary feedback. For the when question, how frequent and how immediate feedback are particularly important. It is suggested that online teaching may provide an opportunity to allow students to decide when they need feedback and to take more control over their learning experience. Based on the analysis of necessity and factors affecting violence, consequently, the researcher developed online lessons that appropriately and effectively enhance critical thinking skills against violence, according to expert opinions and the results of lesson tryout.

2. The students' critical thinking skills against violence after learning with the developed online lessons were higher than before learning with statistical significance at .05 level. Additionally, they are highly satisfied with the online lessons. These online lessons are appropriately integrated critical thinking skills—defining the problem, evaluating the data, identifying assumptions, and making conclusions. The infographic motion format lessons attract and motivate learners with colorful instructional media and interesting presentations. Moreover, the content complies with learners' needs according to the systematic analysis of problems, necessities, and internal and external factors affecting violence. The results of the analysis were consistent with the findings of Agustin, Djoehaeni & Puspita (2020, pp. 195-214), who observed typical violence on children, causes and effects of violence on early childhood development, and the implications for parenting program development. The research revealed that violence inflicted by parents on children is categorized as physical and verbal violence. Moreover, violence may happen in the form of abandonment or neglect. The causes of violence are family economic and financial status, single parenthood, lack of knowledge and comprehension about child growth, unstable emotion, and misunderstanding between strict parenting and violence. Therefore, the parenting program should focus on parents' understanding in their children's needs. The process involves identifying parents' and children's needs, preparing materials, and implementing the program with collaboration of competent stakeholders. The cause of adolescents' higher critical thinking skills is the developed online learning lessons are modern with integration of images, light, colors, and sounds in the learning process which makes the lessons interesting and easy to understand. In addition, the 8 lessons have a systematic development on critical thinking on violence prevention

3. The guidelines for disseminating the online lessons are publicizing the lessons through school networks and educational authorities, as well as government or private agencies. It is suggested to disseminate the lessons to all ages, not only to the 11-15-year-old group. The publication should be in a variety of media with clear search keywords. The online lessons should be integrated with classroom learning activities with a

teacher as a learning promoter, a mentor, or an advisor. The developed lessons should be applied appropriately and expanded to all areas. In the digital age, access to information or individual learning can be carried out over a high-speed internet network. However, access to learning materials needs motivation; therefore, precise and effective keywords are important. In addition, the integration of the materials should be done in accordance with the educational system to avoid learning redundancy. This is in line with Hughes' study (2020, pp. 23-28) about violence in the education system. It appeared that violence is found in schools in symbolic, structural, and physical forms. The symbolic violence is in form of competition, such as sequencing exam scores which signaled a comparison of individual value. Accordingly, Wathne & Brodahl (2017, pp. 33-44) studied the use of mathematics video podcasts as integrated elements of online lessons in university education. The results showed that the in-service perceived efficiency, enjoyment, and concentration as main conditions in their learning process. They also appreciated the video podcast format, and, the data indicates that the video subject content played a role in participants' perceptions of learning process and learning outcome.

For the recommendations for research application were 1) According to the research results, it shows that the developed online lessons to enhance critical thinking skills against adolescent violence are high-qualified and modernized responding to the needs of adolescents. However, it is advisable to introduce values of these lessons to the targeted learners so that they recognize the importance and necessity of the lessons for violence prevention. The developed lesson—developed from situations, texts, dialogues, questions, images, poems, storybooks, and charts—need not to studied in order. However, learners are encouraged to study all lessons. 2) Students' critical thinking skills against violence after learning with the developed online lessons is higher than before learning with statistical significance at .05 level. Additionally, they are highly satisfied with the online lessons. However, for effective learning outcomes, learners should be encouraged to study all eight lessons continuously for knowledge retention based on skill development principles without taking into account lesson sequence order. 3) Regarding the guidelines for publication, the lessons should be publicized through school networks and educational authorities, as well as government or private agencies. It is suggested to disseminate the lessons to all age groups in a variety of media. However, the targeted learners should be most motivated to learn from these online lessons, as well as to understand and recognize the importance of lessons. It is also suggested to publicize the benefits of the lessons to local communities and Thai society.

For the recommendation for further study were 1) It is recommended to conduct research in factors affecting the motivation of online learning for the development of learning management for behavior modification of adolescents. 2) It is recommended to research a causal relationship between adolescent violence and direct and indirect factors of violence, as well as the good practices for preventing family and social violence. 3) It is recommended to do research in engagement patterns of family, community, and society in prevention and avoidance of violence as appropriate to the situation.

Conclusion

The online learning lessons were systematically developed and experimented with the sample group. The experimental result showed that the lessons can enhance critical thinking for violence prevention of adolescents. Some effective conditions were supporting and mentoring by teachers and parents, motivating adolescents to learn with the online learning

lessons, creating understanding, promoting, and searching for a best practice school that successfully integrates the developed online learning lessons, promoting the online learning implementation through all channels, and building the awareness of violence prevention for adolescents.

Reference

- Agustin, M., Djoehaeni, H. & Puspita, R. D. (2020, May). Observational analysis of violence on children and the implications for parenting program development. *Asia-Pacific Journal of Research in Early Childhood Education*, 4 (2), 195-214.
- Akatsuka, Y. (2020). Promoting critical thinking skills in an online EFL environment. *Journal of Pan-Pacific Association of Applied Linguistics*, 24 (2), 95-113.
- Caliskan, S. et al. (2020). Lecturers' views of online instructors about distance education and adobe connect. *International Journal of Emerging Technologies in Learning (iJET)*, 15 (23), 145-157.
- Conklin, W. (2012). *Higher-order thinking skills*. California: Shell Education.
- Dressel, P. & Mayhew, L. B. (1957). *General education: Exploration in evaluation* (2nd ed.). Washington, D.C.: American Council on Education.
- Ennis, R. H. (1989). Critical Thinking and Subject Specificity: Clarification and Needed Research. *Educational Researcher*, 18 (3), 4-10.
- Hughes, C. (2020). Addressing violence in education: From policy to practice. *Prospects: Quarterly Review of Comparative Education*, 48 (1-2), 23-28.
- Maxfield, L. (2020, September – October). Taking a beat: Feedback timing in the age of online lessons. *Journal of Singing; Jacksonville*, 77 (1), 91-94.
- Morin, A. & Forman, J. (2019). *Child development: Milestone and parenting tips*. Retrieve October 30, 2020, from <https://www.verywellfamily.com/child-development-overview-4172261>.
- Muchinsky, P. M. (1993). *Psychology applied to work: An introduction to industrial and organizational psychology* (4th ed.). California: Cole publishing.
- Van Den Berg, G. (2020, October). Context matters: Student experiences of interaction in open distance learning. *Turkish Online Journal of Distance Education*, 21 (4), 223-236.
- Vroom, V. H. (1964). *Work and Motivation*. New York: Jon Wiley & Sons.
- Wathne, U. & Brodahl, C. (2017). Mathematics video podcasts as integrated elements of online lessons in further university education: In-service teachers' flow experiences. *Journal of the International Society for Teacher Education*, 21 (1), 33-44.