

**[AS1, Annotated Bibliography Example, prepared by Dr
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The effectiveness of online learning: Annotated Bibliography

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I Muhammed Mustafa Alharbi declare that I have equally contributed to this project to the best of my ability and that my contribution is my own original work. Muhammed Mustafa Alharbi.

I Umar Khalid Algamdi declare that I have equally contributed to this project to the best of my ability and that my contribution is my own original work. Umar Khalid Algamdi.

I Uthman Abdurrahman Alsheikh declare that I have equally contributed to this project to the best of my ability and that my contribution is my own original work. Uthman Abdurrahman Alsheikh.

Introduction

[Muhammed Mustafa Alharbi, Umar Khalid Algamdi & Uthman Abdurrahman Alsheikh]
Due to the Covid-19 pandemic online learning was widely adopted in different regions and at different levels of study. However, and despite its wide use, the effectiveness of this mode of learning is not understood as much as traditional face-to-face models. Therefore, to ascertain a better understanding of the effectiveness of online learning, the aim of this annotated bibliography is to review research articles that have attempted to gather data related to this subject. The articles were sourced from JSTOR, and all appeared in academic journals.

Annotations

Annotation 1 [Muhammed Mustafa Alharbi]

Chu, H. (2014). Potential Negative Effects of Mobile Learning on Students' Learning Achievement and Cognitive Load—A Format Assessment Perspective. *Journal of Educational Technology & Society*, 17(1), 332–344.

<http://www.jstor.org/stable/jeductechsoci.17.1.332>

The article's main research focus is to investigate if the structured use of personal devices such as mobile phones and portable computers for education (referred to as mobile learning) has negative effects on student learning. This focus also encapsulates a study to determine if mobile learning has a counterproductive effect on students' cognitive load, which relates to the way "... cognitive architecture deals with learning objects during the learning process or

when performing a particular task” (Chu, 2013, p. 333). The research method is quantitative in nature and used an experimental design; in that, the researchers used two fifth-grade sections studying an indigenous culture course. The experimental group was assisted in their learning with mobile devices while the control group was limited to the use of traditional methods. In terms of the results, the experiment found that the control group performed better than the experimental group. Also, the results indicated that the cognitive load of the students in the experimental group was higher than the control, “... which might have led to negative effects on their learning achievements” (Chu, 2014, p. 340).

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Annotation 2 [Umar Khalid Algamdi]

Ni, A. Y. (2013). Comparing the Effectiveness of Classroom and Online Learning: Teaching Research Methods. *Journal of Public Affairs Education*, 19(2), 199–215.

<http://www.jstor.org/stable/23608947>

In the backdrop of an increase of public administration programs being taught online in the US, the article focuses on the effectiveness of online learning compared to more traditional face to face methods. Specifically, the article “... focuses on the multisection experience of one instructor in a research methods course in a public administration program” (Ni, 2013, p. 200). The study employed a quantitative research method by comparing performance records of students studying three online research methods classes to those of students studying the same course taught by the same instructor but in a face-to-face setting. Also, the study collected data from a student satisfaction survey. In relation to the results, the study found that online classes had higher failure rates compared to face-to-face classes. However, the study found that those on the online courses considered their studies less intimidating. Based on these mixed findings, which highlight that there are advantages and disadvantages of both approaches, Ni (2013) recommends that “...we need to consider how to exploit and integrate the comparative advantages of different modes of instruction to specific courses by offering not only fully face-to-face or online but also hybrid classes...” (p. 213).

Annotation 3 [Uthman Abdurrahman Alsheikh]

Ozerbas, M. A. & Erdogan B. H. (2016). The Effect of the Digital Classroom on Academic Success and Online Technologies Self-Efficacy. *Journal of Educational Technology & Society*, 19(4), 203–212. <http://www.jstor.org/stable/jeductechsoci.19.4.203> In response to the rapidly growing use of digital classroom technologies, the focus of the study is to determine if they improve the learning outcomes of 7th grade students and aid them in online technologies self-efficacy. In regard to the research methods used, the study employed a quantitative approach using an experimental design comprising an experimental group (32 students) and a control group (26 students). Both groups would be taught maths and undergo a pre and post-test to help identify variations caused by the independent variable. The experimental group were taught through a digital environment that included "... student devices, teacher devices, communications network, class sharing screen, classroom servers and device management system..." (Ozerbas & Erdogan, 2016, p. 204). The study found the experimental group's results were more favourable than the control group. For example, Ozerbas and Erdogan (2016) suggest that the "... academic success level of the students in the experimental group, who learn mathematics in a digital classroom, is higher than the academic success of students in the control group, who learn in the classroom without any digital technologies" (p. 208). However, the study found that there was not a marked improvement of students in the experimental group in regard to online technologies self-efficacy levels.

Conclusion

[Muhammed Mustafa Alharbi, Umar Khalid Algamdi & Uthman Abdurrahman Alsheikh]

To ascertain a better understanding of the benefits and drawbacks of online learning, the annotated bibliography reviewed articles that have investigated the effectiveness of online learning opposed to traditional face-to-face models. The main research method used in the studies was quantitative and used an experimental design in that they compared the results of students exposed to online learning to students using more traditional models. Chu (2014) found the control group performed better than the experimental group, and Ni's (2013) results indicated that even though students considered online classes less intimidating, they had higher failure rates compared to face-to-face classes. Conversely, Ozerbas and Erdogan's (2016) results indicate that students in the experimental group performed better than students in the control group. The differences in the results could stem from the differences in subjects,

level of study, and the age of the participants or other concomitants related to the reviewed studies, and therefore, more research is required to ascertain a more informed insight into the effectiveness of online learning.