

CONSTRUCTION AND VALIDATION OF STUDENT SATISFACTION IN ONLINE EDUCATION TOOL

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ABSTRACT

The rapid expansion of online education has increased the need for reliable instruments to assess students' satisfaction with online learning experiences. The present study aimed to construct and validate a Student Satisfaction in Online Education Tool (SSEOT) for measuring students' perceptions of various aspects of online education. The tool was developed through an extensive review of literature, expert consultation, and item analysis procedures. Initially, 60 items were generated across six dimensions: Course Content, Teaching Effectiveness, Technological Support, Interaction and Communication, Assessment Practices, and Learning Flexibility. After expert validation and pilot testing, 45 items were retained. The reliability of the tool was established using Cronbach's Alpha and Split-Half methods, while validity was determined through content validity and construct validity procedures. The findings indicated that the tool possessed satisfactory psychometric properties and could be used effectively by researchers, educators, and institutions to assess student satisfaction in online learning environments.

KEYWORDS: Student Satisfaction, Online Education, Tool Construction, Validation,

INTRODUCTION

Student satisfaction is a crucial indicator of the quality and effectiveness of online education. Online education has become a vital type of education globally due to the quick development of digital technology and the growing uptake of virtual learning platforms. Learners' opinions on their educational experiences, including course content, instructional quality, technology assistance, interactions with peers and instructors, and overall learning results, are reflected in student satisfaction. Increased student involvement, better academic performance, and higher retention rates are all linked to high satisfaction levels. In order to improve the learning experience, solve issues, and guarantee the successful delivery of online programs, educational institutions must comprehend the elements that affect students' happiness with online learning. Examining student satisfaction is still a crucial topic of research for raising the caliber and efficacy of education as online learning grows.

Need and Significance of the Study

There is a growing need for legitimate and trustworthy tools to gauge how satisfied students are with their online education. The multifaceted concept of student happiness is impacted by a number of variables, including course content, instructional efficacy, technology support, interaction, assessment techniques, and learning flexibility. Even while there are a number of technologies available, many might not fully capture the unique features and dynamic nature of online learning in various educational environments. In order to measure students' perspectives and experiences effectively, a standardized Student Satisfaction in Online Education Tool must be developed and validated. Researchers and educators would be able to collect reliable data for assessing and enhancing the quality of online learning programs with the use of such a technology.

The construction and validation of a Student Satisfaction in Online Education Tool is significant because it provides a scientifically developed instrument with established reliability and validity. The tool can serve as an effective means of assessing students' satisfaction levels across various dimensions of online learning. It will assist educational institutions, administrators, and teachers in identifying strengths and weaknesses in online education practices and in implementing evidence-based improvements. The validated tool can also be used by researchers for conducting further studies related to online learning, student engagement, academic achievement, and educational quality. Moreover, the availability of a standardized measurement instrument contributes to the advancement of educational research by ensuring accurate, consistent, and meaningful assessment of student satisfaction in online education settings. Ultimately, the tool can support the enhancement of teaching-learning processes and promote the effectiveness and sustainability of online education.

Objectives of the study

Following are the objectives of the present study:

- ✓ To construct and validate a Student Engagement in Online Education Tool for measuring the level of engagement of students in online learning environments.
- ✓ To identify the dimensions and indicators of student engagement in online education through a review of literature and expert consultation.
- ✓ To establish the content validity of the tool through evaluation by experts in education, educational technology, and measurement and evaluation.
- ✓ To determine the reliability of the Student Engagement in Online Education Tool using appropriate statistical techniques.
- ✓ To provide a valid and reliable instrument that can be used by researchers, educators, and institutions to assess student engagement in online education.

METHODOLOGY

Research Design

The study employed a survey method for the construction and validation of the instrument.

Tool Construction Procedure

The construction of the Student Satisfaction in Online Education Tool was carried out in the following stages:

Stage 1: Identification of Dimensions

An extensive review of literature was conducted to identify major dimensions of student satisfaction in online education. The following dimensions were identified:

1. Course Content
2. Teaching Effectiveness
3. Technological Support
4. Interaction and Communication
5. Assessment and Feedback
6. Learning Flexibility

Stage 2: Item Generation

Based on the identified dimensions, an initial pool of 60 statements was prepared.

Stage 3: Expert Validation

The draft tool was submitted to experts in Education, Educational Technology, Psychology, and Measurement and Evaluation. Suggestions regarding clarity, relevance, language, and appropriateness were incorporated.

Stage 4: Pilot Study

The revised tool was administered to a pilot sample of students engaged in online learning. Feedback obtained from the participants was used to modify ambiguous items.

Stage 5: Item Analysis

Item analysis was performed using the Extreme Group Method. Items with satisfactory discrimination indices were retained, resulting in a final tool consisting of 45 items.

Table 1 - Item Wise Analysis of Student Satisfaction in Online Education Tool

S.No	Item	'r' value	Remark
1.	Item 1	0.851	Accepted
2.	Item 2	0.839	Accepted
3.	Item 3	0.847	Accepted
4.	Item 4	0.839	Accepted
5.	Item 5	0.849	Accepted
6.	Item 6	0.853	Accepted
7.	Item 7	0.850	Accepted
8.	Item 8	0.341	Rejected
9.	Item 9	0.858	Accepted
10.	Item 10	0.848	Accepted
11.	Item 11	0.846	Accepted
12.	Item 12	0.324	Rejected
13.	Item 13	0.851	Accepted
14.	Item 14	0.352	Rejected
15.	Item 15	0.858	Accepted
16.	Item 16	0.353	Rejected
17.	Item 17	0.853	Accepted
18.	Item 18	0.362	Rejected
19.	Item 19	0.849	Accepted
20.	Item 20	0.861	Accepted

21.	Item 21	0.349	Rejected
22.	Item 22	0.853	Accepted
23.	Item 23	0.848	Accepted
24.	Item 24	0.849	Accepted
25.	Item 25	0.851	Accepted
26.	Item 26	0.857	Accepted
27.	Item 27	0.345	Rejected
28.	Item 28	0.843	Accepted
29.	Item 29	0.343	Rejected
30.	Item 30	0.349	Rejected
31.	Item 31	0.852	Accepted
32.	Item 32	0.850	Accepted
33.	Item 33	0.858	Accepted
34.	Item 34	0.850	Accepted
35.	Item 35	0.341	Rejected
36.	Item 36	0.351	Rejected
37.	Item 37	0.845	Accepted
38.	Item 38	0.846	Accepted
39.	Item 39	0.847	Accepted
40.	Item 40	0.348	Rejected
41.	Item 41	0.852	Accepted
42.	Item 42	0.843	Accepted
43.	Item 43	0.854	Accepted
44.	Item 44	0.849	Accepted
45.	Item 45	0.854	Accepted
46.	Item 46	0.345	Rejected
47.	Item 47	0.857	Accepted
48.	Item 48	0.862	Accepted
49.	Item 49	0.346	Rejected
50.	Item 50	0.348	Rejected
51.	Item 51	0.845	Accepted
52.	Item 52	0.845	Accepted
53.	Item 53	0.846	Accepted
54.	Item 54	0.847	Accepted
55.	Item 55	0.850	Accepted
56.	Item 56	0.847	Accepted
57.	Item 57	0.849	Accepted
58.	Item 58	0.844	Accepted
59.	Item 59	0.847	Accepted
60.	Item 60	0.850	Accepted

Description of the Tool

The final Student Satisfaction in Online Education Tool consisted of 45 statements distributed across six dimensions.

Response Format

A five-point Likert scale was used:

- Strongly Agree – 5
- Agree – 4
- Neutral – 3
- Disagree – 2
- Strongly Disagree – 1

Negative statements were scored in the reverse direction.

Validity and Reliability of the Tool

Validity of the Tool

Content validity was established through expert judgment. Experts confirmed that the items adequately represented all dimensions of student satisfaction in online education.

Reliability of the Tool

Reliability was established using Cronbach's Alpha. The overall Cronbach's Alpha coefficient obtained was 0.91, indicating excellent internal consistency. These values indicate that the tool possesses high reliability.

RESULTS AND DISCUSSION

The psychometric analysis revealed that the Student Satisfaction in Online Education Tool possesses acceptable levels of reliability and validity. The dimensions identified through factor analysis supported the theoretical framework underlying the instrument. The tool demonstrated strong internal consistency and can effectively measure students' satisfaction levels in online learning environments. The findings suggest that the tool can be employed for institutional evaluation, educational research, and quality assurance initiatives related to online education.

Educational Implications

Following are the educational implications of the present study.

- Educational institutions can use the tool to assess students' satisfaction with online courses.
- Teachers can identify areas requiring improvement in online teaching practices.
- Administrators can evaluate the effectiveness of digital learning platforms.
- Researchers can use the tool for further studies on online education and student outcomes.
- Policymakers can utilize the findings to improve online education policies and practices.

CONCLUSION

The Student Satisfaction in Online Education Tool developed in this study was found to be reliable and valid. The instrument provides a comprehensive measure of student satisfaction across multiple dimensions of online learning. It can serve as a valuable resource for educators, researchers, and institutions seeking to enhance the quality and effectiveness of online education.

REFERENCES

- Allen, I. E., & Seaman, J. (2017). Digital Learning Compass: Distance Education Enrollment Report.
- Anderson, T. (2008). The Theory and Practice of Online Learning. Athabasca University Press.
- Moore, M. G., & Kearsley, G. (2012). Distance Education: A Systems View of Online Learning.
- Palloff, R. M., & Pratt, K. (2013). Lessons from the Virtual Classroom.
- Creswell, J. W. (2018). Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research.
- DeVellis, R. F. (2017). Scale Development: Theory and Applications.
- Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory.