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Original Research Article

Revamping Instructional Materials to Enhance Learner Motivation in Massive Open Online Courses

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Abstract

The quality and design of instructional materials are fundamental in shaping learners' motivation, engagement, and learning outcomes in Massive Open Online Courses (MOOCs). This study aims to examine the quality of instructional materials on learners' motivation in MOOCs through the lens of the ARCS Model by John Keller, focusing on Attention, Relevance, Confidence, and Satisfaction. By analysing learners' perceptions and preferences, this research seeks to offer valuable insights into optimizing instructional materials to enhance motivation, engagement, and overall learning effectiveness. The study adopted a quantitative research method to assess the motivation levels of 42 MOOC learners using the Instructional Materials Motivation Survey (IMMS). Results indicated that the participants exhibited positive motivation levels, suggesting that the instructional materials effectively captured their interest and supported their learning experiences. Furthermore, learners expressed overall satisfaction with the quality and presentation of the content provided in the MOOCs. Despite the positive feedback, participants also highlighted areas for enhancement, particularly the need for more interactive elements to sustain engagement. Additionally, some learners recommended greater flexibility in content delivery, ensuring that materials cater to diverse learning preferences. These findings underscore the imperative need for continuous refinement of instructional materials in MOOCs to sustain learner motivation, maximize engagement, and foster a more immersive and effective learning environment. By addressing these critical aspects, MOOC providers can significantly enhance learner experiences and drive academic success in the digital learning landscape.

Keywords: Instructional Materials, Learner's Motivation, ARCS, MOOCs.

INTRODUCTION

In the digital age, Massive Open Online Courses (MOOCs) have revolutionized higher education, offering unparalleled access, flexibility, and scalability to learners worldwide. MOOCs have democratized education by removing geographical, financial, and institutional barriers, allowing millions of learners to acquire new knowledge and skills from renowned universities and subject-matter experts (Pappano, 2012; Yuan & Powell, 2013). These online courses have opened doors for lifelong learning, professional development, and up skilling, making quality education accessible to diverse learners, including working professionals, students, and individuals from underprivileged backgrounds (Liyanagunawardena, Adams, & Williams, 2013). The integration of MOOCs into higher education has significantly enhanced learning experiences, fostered innovation in teaching methodologies, and encouraged collaborative knowledge-building across disciplines. Universities worldwide are increasingly adopting MOOCs to supplement traditional courses, offer micro-credentials, and create blended learning environments (Jansen & Konings, 2017). Furthermore, MOOCs enable institutions to reach global audiences, promote cross-cultural learning, and encourage self-paced, independent learning, empowering students to take charge of their educational journey (Siemens, 2013).

Despite these advantages, one of the most pressing challenges in MOOCs is maintaining learner motivation and engagement throughout the course duration. Studies have consistently shown that low motivation levels lead to high dropout rates, with many learners disengaging before completing their courses (Hew & Cheung, 2014; Jordan, 2015). Sustaining learner motivation is critical to maximizing the educational

benefits of MOOCs and ensuring that students remain actively involved in their learning process. One of the key determinants of learner motivation in MOOCs is the quality and design of instructional materials. Engaging, well-structured, and interactive learning resources can spark curiosity, sustain interest, and promote deeper understanding, ultimately leading to a more meaningful and fulfilling learning experience (Means *et al*., 2014; Richardson *et al*., 2017). High-quality instructional materials not only facilitate knowledge acquisition but also influence learners' emotional engagement, self-efficacy, and persistence throughout the course. Research highlights that visually appealing content, multimedia elements, and interactive activities significantly enhance learner engagement, cognitive processing, and knowledge retention (Guo, Kim, & Rubin, 2014; Sung *et al*., 2019). In contrast, text-heavy, monotonous, and poorly organized materials often lead to **c**ognitive overload, frustration, loss of interest, and eventual disengagement (Ebben & Murphy, 2014).

MOOCs, by nature, are self-paced and self-directed, requiring learners to stay motivated and take ownership of their learning journey. Without the physical presence of instructors or peer-driven classroom environments, instructional materials act as the primary medium of engagement between the learner and the course content (Kop, 2011). Studies suggest that clear, concise, and well-organized learning materials help learners navigate the content more effectively, reducing feelings of overwhelm and uncertainty (Martin, Ndoye, & Wilkins, 2016). Scaffolded learning materials, where content is broken down into structured segments, further contribute to improved comprehension and motivation (Sweller, Ayres, & Kalyuga, 2011). The integration of multimedia and interactive elements in instructional materials has been found to significantly enhance learner motivation and engagement. Research suggests that videos, animations, simulations, infographics, and gamified elements make learning more dynamic, enjoyable, and effective (Mayer, 2020; Wang *et al*., 2019). Short, well-designed instructional videos that include visual cues, storytelling, and real-world examples have been shown to improve knowledge retention and learner satisfaction (Brame, 2016). Additionally, interactive components such as quizzes, discussion forums, virtual labs, and adaptive assessments provide learners with immediate feedback and a sense of progress, which reinforces self-efficacy and motivation (Hansch *et al*., 2015).

Theoretical Framework: The ARCS Model of Motivation

As MOOCs rely heavily on self-directed learning, instructional materials play a pivotal role in creating a stimulating and immersive learning environment**.** When designed effectively, instructional materials can transform passive learning into an engaging, dynamic experience, fostering intrinsic motivation and a sense of accomplishment among learners (Kizilcec *et al*., 2017). Therefore, revamping instructional materials to align with learner needs, cognitive engagement strategies, and motivational theories is essential to enhancing the overall learning experience in MOOCs.

To systematically analyze the relationship between instructional materials and learner motivation, this study employs John Keller's ARCS Model of Motivation (1987). The ARCS Model provides a structured and well-established framework for understanding and improving motivation in instructional settings. It focuses on four essential dimensions:

- **Attention**: The ability of instructional materials to capture and sustain learners' interest using engaging visuals, storytelling, real-world examples, and interactive components.
- **Relevance**: The degree to which the course content aligns with learners' goals, interests, and real-life applications, increasing their perceived value of the learning experience.
- **Confidence**: The extent to which instructional materials help learners develop a sense of achievement and belief in their ability to succeed, supported by clear guidance, self-assessment opportunities, and scaffolded learning experiences.
- **Satisfaction**: The sense of fulfilment and reward learners experience upon completing learning activities, which can be reinforced through constructive feedback, practical applications, and gamified incentives.

The ARCS Model has been widely applied in educational psychology and instructional design to enhance learner engagement and persistence (Keller, 2010). By using this model, this study aims to assess the effectiveness of instructional materials in MOOCs, identify areas for improvement, and propose innovative strategies for increasing learner motivation.

Research Aim and Significance

This research investigates how instructional materials in MOOCs influence learner motivation**,** guided by the ARCS Model. By analyzing the current state of instructional design in MOOCs, this study seeks to identify best practices, challenges, and strategies for optimizing learning resources to enhance learner engagement. The findings will contribute valuable insights to educators, course designers, and MOOC providers, helping them create more compelling and motivating online learning experiences. Ultimately, revamping instructional materials in MOOCs has the potential to increase learner retention, foster academic success, and improves the overall effectiveness of online education.

METHODOLOGY & RESEARCH DESIGN

This study employed a quantitative research approach to systematically assess the motivation levels

of MOOC learners at the undergraduate (UG) and postgraduate (PG) levels.

The study followed a descriptive survey research design, which is widely used in educational research to collect and analyze data from a specific population at a particular point in time (Creswell, 2014). This design was chosen as it allows for an in-depth examination of learners' motivational perceptions and experiences regarding the instructional materials used in MOOCs.

Sampling Method & Participants

The study employed a volunteer sampling technique, a form of non-probability sampling, wherein participants self-selected to take part in the study (Etikan, Musa, & Alkassim, 2016). This approach was deemed suitable as MOOCs attract diverse learners with different educational backgrounds, interests, and learning motivations.

A total of 42 MOOC learners participated in the study, including both undergraduate (UG) and postgraduate (PG) students. These learners had enrolled in various MOOC courses and had first-hand experience with different instructional materials. Their participation was voluntary, and informed consent was obtained before data collection.

Research Instrument

The research focused on evaluating how instructional materials impact learner motivation using the Instructional Materials Motivation Survey (IMMS), a well-established tool grounded in Keller's ARCS Model of Motivation (Attention, Relevance, Confidence, and Satisfaction). The IMMS consists of 36 items, each rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Scores for each ARCS subscale are computed by summing the relevant item responses, with higher scores indicating greater motivation. The total IMMS score provides an overall measure of learners' motivational responses to instructional materials, aiding in the evaluation of their effectiveness in MOOCs.

Data Collection Procedure & Data Analysis

Data was collected online using a Google Forms survey link, ensuring ease of access and convenience for participants. The online mode of data collection was chosen due to its efficiency in reaching MOOC learners across different geographical locations. The survey link was shared through MOOC discussion forums, institutional mailing lists, and social media groups to encourage voluntary participation.

The collected data was analyzed using descriptive statistical techniques. The results derived from this analysis provided empirical insights into how well instructional materials in MOOCs align with the motivational needs of learners and identified areas where improvements could enhance engagement and learning outcomes.

Scale Reliability

To ensure the internal consistency of the Instructional Materials Motivation Survey (IMMS) used in this study, Cronbach's alpha coefficient was computed. The IMMS questionnaire consists of 36 items, and reliability analysis was conducted on responses from 42 participants. The Cronbach's alpha value was found to be 0.85, indicating a high level of internal consistency and suggesting that the items in the scale measure the intended constructs reliably. This level of reliability aligns with the acceptable threshold for psychological and educational research, confirming that the IMMS is a suitable instrument for assessing students' motivation in the given context.

Results: Level of Motivation in Massive Open Online Courses

In this section, the motivation levels of MOOC students were assessed using the four subscales of the ARCS Model**:** Attention, Relevance, Confidence, and Satisfaction.

Table 1.1: Range of Motivation Level

Level of Motivation	Range of Scores
Low Level of Motivation	< 3.00
Medium Level of Motivation	3.00 – 3.49
Upper Medium Level of Motivation	3.50 – 3.99
High Level of Motivation	4.00 – 5.00

Source: ARCS Model by Keller

Table 1.1 presents the classification of motivation levels based on the ARCS Model by Keller. The motivation levels are categorized into four ranges: Low (<3.00), Medium (3.00–3.49), Upper Medium (3.50–3.99), and High (4.00–5.00). This classification provides a structured approach to interpreting students' motivation scores, facilitating a clearer analysis of their engagement with instructional materials in the ODL system.

Table 1.2: Mean Scores of Motivation Level

Dimension	Minimum	Maximum	Mean
Attention (A)	2.83	4.66	4.01
Relevance (R)	3.22	4.33	3.82
Confidence (C)	2.77	4.77	4.08
Satisfaction (S)	3.16	4.83	4.27
ARCS (Overall)	3.41	4.5	4.02

The analysis of students' motivation levels based on the ARCS Model reveals an overall high level of motivation **(**Mean=4.02) among MOOC learners. Among the four dimensions, Satisfaction (Mean=4.27) emerges as the strongest factor, indicating that students derive a high level of fulfilment and positive reinforcement from their learning experiences. This

suggests that the instructional design and content delivery in the MOOC are effectively meeting learners' expectations and providing a sense of accomplishment. Similarly, Confidence (Mean=4.08) also falls within the high motivation range, implying that students generally believe in their ability to succeed in MOOC-based learning. The structured presentation of content, assessments, and feedback mechanisms likely contribute to their self-efficacy.

Attention (Mean=4.01) is another strong factor, signifying that the course materials are engaging and capable of sustaining students' interest. This suggests that multimedia elements, interactive content or real-world applications within the MOOC may have played a role in capturing learners' attention. However, Relevance (Mean=3.82), though still within the upper medium motivation range, is slightly lower compared to other dimensions. This indicates that while students find the course content somewhat meaningful, further alignment with their personal, academic, or career goals could enhance their motivation. The findings suggest that while the MOOC effectively motivates learners, enhancing content relevance and personalization strategies could further optimize engagement and learning outcomes.

Motivational Needs Based on the ARCS Framework

Motivational needs in learning environments refer to the factors that drive students to engage with and persist in their studies. Understanding these needs is essential for designing effective instructional materials that enhance student engagement and learning outcomes in MOOCs. Table 1.3 presents the mean scores for the Attention dimension of motivation level, providing insights into how well the instructional materials in the MOOC environment engage learners.

Table 1.3: Mean Scores for Attention Dimension of Motivation Level

Attention (A) Dimension of Motivation Level	**Mean**
Q1. There was something interesting at the beginning of this course that got my attention.	3.69
Q2. These self-learning materials are eye-catching.	3.90
Q3. The writing standard of the reading material helped to keep my attention.	3.76
Q4. This course is so abstract that it was hard to keep my attention. (Reverse Item)	4.16
Q5. The pages of this reading material look dry and unappealing. (Reverse Item)	4.38
Q6. The way the content is arranged on the reading material pages helped to keep my attention.	4.07
Q7. This course has things that stimulated my curiosity.	4.19
Q8. The amount of repetition in this course caused me to get bored sometimes. (Reverse Item)	4.28
Q9. In this course, I learned few things that were surprising or unexpected.	3.90
Q10. The variety of reading passages, exercises, illustrations, etc., helped to keep my attention on this course.	**3.54**
Q11. The style of writing in reading material is boring. (Reverse Item)	3.92
Q12. There are so many words on each page of reading material that it is irritating. (Reverse Item)	**4.30**

The findings from the Attention dimension of motivation indicate that the MOOC effectively captures and sustains learners' interest through engaging content, structured presentation, and visually appealing materials. The introduction of the course played a moderate role in drawing attention, as reflected in the mean score of 3.69, suggesting that while it was somewhat engaging, further enhancements could make it more compelling. The self-learning materials were generally eye-catching (M=3.90), indicating that their visual appeal contributed positively to initial engagement. Additionally, the writing style and content organization were found to be effective in maintaining learners' attention (M=3.76 for writing clarity and M=4.07 for content arrangement), reinforcing the importance of well-structured instructional design in MOOCs. Students also reported that the course effectively stimulated their curiosity (M=4.19) and presented some surprising or unexpected elements (M=3.90), which suggests that incorporating more novel or interactive elements could further enhance engagement.

The reverse-coded items provided insights into potential distractions or disengagement, revealing that students did not find the course too abstract (M=4.16) or the reading materials visually unappealing (M=4.38). Moreover, the writing style was not perceived as boring (M=3.92), and learners did not feel overwhelmed by excessive text on each page (M=4.30), indicating that the balance between textual and visual elements was well-maintained. The variety of reading passages, exercises, and illustrations received a lower mean score (M=3.54), indicating that increasing content diversity could further sustain learner engagement.

Overall, the results suggest that the MOOC successfully maintains students' attention through well-designed instructional materials and engaging content. However, enhancing content variety, refining the course introduction, and reducing excessive repetition could further optimize students' motivation and sustained engagement. These improvements would ensure that the course remains both visually stimulating and intellectually engaging, ultimately leading to better learning outcomes in the MOOC environment.

Table 1.4: Mean Scores for Relevance Dimension of Motivation Level

Relevance (R) Dimension of Motivation Level	Mean
Q1. It is clear to me how the content of this reading material relates to things I already know.	3.85
Q2. There were stories, pictures, or examples that showed me how this reading material could be important to some people.	3.33
Q3. Completing this course successfully is important to me.	3.80
Q4. The content of this reading material is relevant to my interests.	4.04
Q5. There are explanations or examples of how people use the knowledge in this course.	3.57
Q6. The content and style of SLM writing in this course convey the impression that its content is worth knowing.	3.78
Q7. This course was not relevant to my needs because I already knew most of it. (Reverse Item)	3.95
Q8. I could relate the content of this course to things I have seen, done, or thought about in my life.	3.97
Q9. The content of this course will be relevant to me.	4.11

The Relevance dimension of motivation assesses how well learners perceive the course content as meaningful, applicable, and aligned with their prior knowledge, interests, and future goals. Based on the table 1.4, the findings suggest that the MOOC was generally perceived as relevant, with most items receiving moderately high scores. The highest-rated item, "The content of this course will be relevant to me" (M=4.11), indicates that learners strongly believe that the knowledge gained from the course will be valuable in the future. Similarly, students reported that the content was aligned with their interests (M=4.04) and could be connected to their personal experiences (M=3.97). These results highlight that the course successfully integrates relatable and meaningful content, which is a key factor in sustaining learner motivation. A crucial aspect of relevance is how well the course builds on learners' prior knowledge. The item "It is clear to me how the content of this reading material relates to things I already know" received a mean score of 3.85, suggesting that most students could establish connections between the new material and their existing knowledge base. Furthermore, the importance of successfully completing the course was evident; as students rated this aspect M=3.80, indicating that they saw a clear value in mastering the content. Additionally, the writing style and presentation of the course materials were perceived as conveying the impression that the content was worth learning (M=3.78), reinforcing the idea that well-crafted instructional design contributes to learners' sense of relevance.

Despite these positive findings, some areas for improvement emerged. The presence of stories, pictures, or examples that illustrate the significance of the material received a relatively lower score (M=3.33), suggesting that learners may have benefited from more concrete real-world applications and contextualized explanations. Similarly, the inclusion of examples or explanations on how people use the knowledge from the course was rated 3.57, indicating that more explicit demonstrations of practical applications could enhance the perceived relevance of the course. While most learners found the course relevant to their needs, the reverse-coded item "This course was not relevant to my needs because I already knew most of it" received a mean score of 3.95, suggesting that while some students felt they were learning new material, a few may have found certain parts redundant.

Overall, the results suggest that the MOOC successfully establishes relevance by aligning content with learners' interests, prior knowledge, and perceived future applicability. However, enhancing the use of real-life examples, case studies, and contextual storytelling could further strengthen students' connection to the material. By integrating more concrete demonstrations of how the knowledge can be applied in real-world settings, the course could deepen its impact and sustain learner motivation more effectively.

Table 1.5: Mean Scores for Confidence Dimension of Motivation Level

Confidence (C) Dimension of Motivation Level	Mean
Q1. When I first looked at this program, I had the impression that it would be simple for me.	4.07
Q2. This self-learning material was more difficult to understand than I would like for it to be. (Reverse Item)	4.07
Q3. After reading the introductory information, I felt confident that I knew what I was supposed to learn from this Massive Open Online Course.	4.07
Q4. Inside SLM many of the pages had so much information that it was hard to pick out and remember the important points. (Reverse Item)	4.02
Q5. As I worked on this Massive Open Online Course, I was confident that I could learn the content.	4.19
Q6. The exercises in this programme of study were too difficult. (Reverse Item)	4.09
Q7. After working on this programme of study for a while, I was confident that I would be able to pass a test on it.	4.16

Q8. I could not really understand quite a bit of the learning material in this Massive Open Online Course. (Reverse Item)	4.23
Q9. The good organization of the content helped me to be confident that I would learn this self-learning material.	3.88

The Confidence dimension in the ARCS model evaluates how well learners believe in their ability to succeed in a course. The findings suggest that students generally felt confident in their ability to learn from the MOOC, as reflected in the consistently high mean scores across all items. A key indicator of confidence is students' initial perception of the course difficulty, with the item "When I first looked at this program, I had the impression that it would be simple for me" receiving a mean score of 4.07. This suggests that learners did not feel intimidated by the course at first glance, which is crucial for fostering a positive learning experience. Additionally, after engaging with the introductory information, students felt assured about what they were expected to learn (M=4.07), indicating that the course objectives were clearly communicated.

As learners progressed through the course, their confidence in mastering the content remained strong. The item "As I worked on this Massive Open Online Course, I was confident that I could learn the content" received one of the highest scores (M=4.19), demonstrating that the instructional design successfully supported learners in building their self-efficacy. Similarly, students believed that after engaging with the material, they would be able to pass an assessment (M=4.16), further affirming that the course structure reinforced their confidence in achieving success. The organization of content also played a role in maintaining this confidence, with a mean score of 3.88, suggesting that while the material was well-structured, there is still room for improvement in making content organization more effective in boosting confidence.

The reverse-coded items provided insights into potential challenges learners faced. The statement "This self-learning material was more difficult to understand than I would like for it to be" had a reverse-coded mean score of 4.07, indicating that students generally did not perceive the content as excessively difficult. Similarly, the reverse-coded item on excessive information density in SLM pages received a mean score of 4.02, implying that while some learners found it challenging to identify key points, the difficulty level was not overwhelming. Another significant item, "I could not really understand quite a bit of the learning material in this MOOC", received a reverse-coded mean score of 4.23, suggesting that most learners found the material comprehensible and manageable. The reverse-coded item on exercise difficulty (M=4.09) indicates that learners did not perceive the exercises as too challenging, reinforcing the idea that the course maintained an appropriate balance between complexity and accessibility.

Overall, the results suggest that the MOOC effectively fostered confidence among learners by presenting clear objectives, structuring content in a way that facilitated comprehension, and providing exercises that were appropriately challenging without being discouraging. However, further refinement in content organization and the emphasis on key points within the learning materials could enhance confidence even more. By ensuring that learners can easily identify and retain essential concepts, the course can further strengthen their self-assurance, leading to greater persistence and success in the MOOC environment.

Table 1.6: Mean Scores for Satisfaction Dimension of Motivation Level

Satisfaction (S) Dimension of Motivation Level	**Mean**
Q1. Completing the exercises in this Massive Open Online Course gave me a satisfying feeling of accomplishment.	4.45
Q2. I enjoyed this Massive Open Online Course so much that I would like to know more about this topic.	4.16
Q3. I really enjoyed studying this Massive Open Online Course.	4.42
Q4. The wording of feedback after the exercises, or of other comments in this programme of study, helped me feel rewarded for my effort.	3.78
Q5. I felt good to successfully complete this Massive Open Online Course.	4.88
Q6. It was a pleasure to work on such a well-designed Massive Open Online Course.	3.92

The Satisfaction dimension in the ARCS model evaluates how rewarding and enjoyable learners find the course, which directly influences their motivation to continue learning. Based on the table 1.6, the findings indicate that students had a high level of satisfaction with the MOOC, as reflected in the strong mean scores across all items. The highest-rated item, "I felt good to successfully complete this Massive Open Online Course", received an exceptional mean score of 4.88, suggesting that learners experienced a strong sense of achievement upon course completion. This indicates that the course effectively fosters a sense of accomplishment, which is essential for sustaining motivation in self-directed learning environments. Students also found the learning experience enjoyable; with "I really enjoyed studying this Massive Open Online Course" receiving a mean score of 4.42, and "I enjoyed this course so much that I would like to know more about this topic" rated at

4.16. These results suggest that the course content and delivery were engaging enough to inspire further interest in the subject matter. Additionally, the completion of exercises was particularly rewarding for students, as indicated by the mean score of 4.45 for the item "Completing the exercises in this Massive Open Online Course gave me a satisfying feeling of accomplishment". This highlights the effectiveness of well-designed activities in reinforcing motivation and engagement.

While overall satisfaction was high, some areas for improvement were identified. The statement "The wording of feedback after the exercises, or of other comments in this programme of study, helped me feel rewarded for my effort" received a comparatively lower mean score of 3.78, suggesting that feedback mechanisms could be enhanced to better acknowledge students' efforts and reinforce their learning progress. Additionally, while the course was generally perceived as well-structured and enjoyable, the item "It was a pleasure to work on such a well-designed Massive Open Online Course" scored 3.92, indicating that while learners found the course design satisfactory, there is room for further refinements in instructional design and user experience to enhance overall enjoyment.

Overall, the findings demonstrate that students derived a strong sense of achievement, enjoyment, and engagement from the MOOC, making it a highly satisfying learning experience. However, enhancing feedback mechanisms and refining course design elements could further improve learners' motivation and reinforce their overall satisfaction with the course. By addressing these aspects, the course can increase learner retention and encourage continued engagement with the subject matter in future learning experiences.

Major Findings

The study's findings, based on the ARCS model of motivation, provide valuable insights into the motivation levels of MOOC learners across the four dimensions: Attention, Relevance, Confidence, and Satisfaction. The results suggest that the course was generally successful in engaging learners and sustaining their motivation, with some areas identified for potential improvement.

In terms of Attention, learners reported that the course effectively captured their interest through its well-structured content, engaging presentation, and visually appealing materials. The course effectively stimulated curiosity, and the organization of content helped maintain attention. The study's findings indicate that while the MOOC was generally successful in maintaining learner motivation, certain areas require improvement to further sustain engagement and enhance the overall learning experience. One of the key observations was related to content diversity, as some learners felt that the variety of reading passages, exercises, and illustrations could be expanded. This suggests that although the course content was effective in capturing learners' attention, increasing the diversity of instructional materials—such as interactive elements, multimedia resources, and real-world examples—could further enhance engagement and motivation.

The Relevance dimension showed that learners perceived the course content as meaningful and connected to their prior knowledge, interests, and future applications. The highest-rated items indicated that learners recognized the importance of the course and its usefulness in their personal or professional lives. However, the lower ratings on items related to real-world examples and contextual storytelling suggest that including more case studies, relatable scenarios, and practical applications could further strengthen the perceived relevance of the course.

In the Confidence dimension, findings revealed that learners felt capable of understanding and succeeding in the course, with high ratings for clarity of learning objectives, structured content, and self-efficacy in mastering the material. Most students felt that the course was not overly difficult and believed they could perform well in assessments. However, some reported that certain sections contained dense information, making it challenging to extract key points. Enhancing content organization and clarity in presenting critical concepts could further improve learner confidence.

Finally, the Satisfaction dimension showed that learners derived a strong sense of accomplishment and enjoyment from completing the course. The highest ratings were observed for feelings of achievement and interest in further learning, demonstrating the course's success in fostering a rewarding learning experience. However, learners felt that feedback on exercises and assessments could be improved to better recognize their efforts and reinforce their learning progress. Additionally, while course design was generally appreciated, minor refinements in interactivity and user experience could enhance overall satisfaction.

Overall, the findings indicate that the MOOC effectively engages learners and maintains motivation across all four dimensions of the ARCS model. However, incorporating greater content variety, practical applications, improved feedback mechanisms, and refined content organization could further optimize the learning experience and sustain motivation at even higher levels. By addressing these aspects, MOOCs can continue to enhance learner engagement, confidence, and satisfaction, ultimately leading to improved learning outcomes and sustained participation.

EDUCATIONAL IMPLICATIONS & CONCLUSION

The study’s findings provide valuable insights for improving MOOCs by enhancing learner

engagement, relevance, confidence, and satisfaction. Key stakeholders, including higher education institutions, course designers, course coordinators, and policymakers, must implement targeted strategies to improve online learning experiences.

➢ **Implications for Higher Education Institutions**

Institutions should invest in diverse and interactive content, including multimedia and real-world applications, to sustain learner motivation. Faculty training on online teaching strategies and student engagement is essential. Establishing support systems, such as discussion forums, virtual mentorship, and timely feedback, can enhance retention and learning outcomes.

➢ **Implications for Course Designers**

Course designers must ensure that MOOCs include a variety of instructional materials, such as case studies, gamified elements, and interactive exercises. Clear content structuring, breaking down complex topics, and incorporating self-assessment tools can improve learner confidence. Personalized feedback and adaptive learning pathways should be integrated to enhance motivation and satisfaction.

➢ **Implications for Course Coordinators**

Course coordinators should actively monitor student engagement and address learning challenges. Encouraging regular communication, peer discussions, and interactive assignments can foster a sense of community. Providing timely and constructive feedback and analyzing learner data to offer additional support can further improve motivation and course completion rates.

➢ **Implications for Policymakers**

Policymakers should promote high-quality MOOC design, ensuring the integration of interactive and adaptive technologies. Funding for faculty development programs and policies supporting industry-academia collaboration can enhance course relevance. Addressing digital accessibility by providing open educational resources and improving internet access can increase participation and bridge learning gaps.

CONCLUSION

This study highlights the importance of learner motivation in MOOCs and the need for continuous improvements in course design and engagement strategies. While MOOCs effectively capture interest, enhancing content diversity, interactivity, and structured feedback can further sustain motivation. A collaborative effort among institutions, course designers, coordinators, and policymakers is crucial for creating engaging and student-centered learning environments. Integrating multimedia, real-world applications, and adaptive learning can improve confidence and satisfaction. Course coordinators must ensure active participation and timely feedback, while policymakers should focus on accessibility, funding, and industry alignment. By adopting learner-focused strategies, MOOCs can become more effective, inclusive, and impactful, leading to higher retention and educational success.

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