

# CREATING INTERACTIVE TEACHING CONTENT USING MOODLE AND H5P – TEACHERS’ PERSPECTIVES FROM THE COLLEGES OF TECHNOLOGY IN OMAN

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**ABSTRACT:** Moodle has been a widely used educational online platform that enables teacher-student and student-student collaboration very effectively. During the Covid-19 pandemic, it has been of tremendous help along with other online platforms. However, making online classes interactive has been a great challenge and the new H5P plugin which seamlessly integrates with Moodle addresses the problem remarkably well. Thanks to H5P, now online classes will become closer to face-to-face teaching with regard to being more interactive. The researchers’ conviction of this resulted in the conduct of a training session where more than sixty teachers from various colleges of technology participated. This research paper analyses how teachers perceived the efficacy of H5P in creating interactive teaching content. The primary aim of this research work is to convince the policy makers of the usefulness of H5P and persuade the teachers to take up H5P more seriously.

**KEYWORDS:** Moodle, H5P, interactive, plugin, integration

## I. INTRODUCTION

Most educators would agree that students’ attention span is an important factor to be considered while planning for the delivery of the lessons. Over a period of time, the attention span has considerably reduced. This problem is more pronounced with Gen Z or iGen as they have been known for their very short attention span. Deep Patel in his Forbes’ article says that Gen Z has an attention span of just eight seconds. Dr. Jean Twenge says that iGen is the first generation to spend their entire adolescence in the age of smart phones. As a result, they constantly fuel their brains with multimedia engagement, video games and social media content which in turn has made them visual learners. Apart from this, the sudden arrival of corona virus pandemic has forced teachers to shift their mode of teaching to online platforms at a very short notice. This has called for an immediate restructuring of course components and implementing of a new pedagogical approach. Student engagement is always the best predictor of learning outcomes. Thanks to LMS platforms like Moodle, interaction between students and teachers is made possible. However, students’ interaction with the content remains a problem to be solved. Getting students connected to the content for a certain amount of quality time is one of the biggest challenges that teachers have to deal with. In other words, getting rid of the loneliness of a distant learner is a challenge that requires creative solutions. Getting a satisfactory participation percentage in a considerable amount of activities is the next challenge that teachers encounter while teaching online. Therefore, the challenge is to increase quality participation that reflects students’ progress in their level of understanding. Most importantly, making learning fun, breaking the monotony by surprise pop up questions and imparting energy and life to the content are all challenging tasks.

Student interaction with the course content is another difficult thing to ensure since students are physically absent before the eyes of the teacher. Online course content sometimes makes students feel less connected to the content. Incorporating interactivity to the content will help overcome the limitations of online content which doesn’t allow spontaneous changes and adjustments which are characteristic of face-to-face teaching. Students seem to be reluctant to participate in online class discussions and as a result they are found to lag behind or stick to bare minimum participation in activities. A complete disappearance of collaborative activity can be observed in some of the courses. Since the course material is set up on a platform such as Moodle well in advance, it is difficult to include concept checking questions during the delivery of the content. A platform that can instill enthusiasm in the content, ensure intrinsic motivation, maximize student involvement and interaction with the content will always inspire students to venture into more online courses. Keeping these problems in mind, the Research and Consultancy Committee of Ibra College of Technology probed different online platforms that would meet the aforementioned expectations. After some painstaking research in collaboration with the Moodle administrator, the committee chose H5P and the members strongly felt that H5P is more suited for the

requirements of the college. To add more credibility to its research findings, the committee conducted a hands-on training session on creating interactive teaching content using Moodle and H5P to teachers from different colleges of technology. The research and the feedback from the teachers form the core of this research article.

## **II. LITERATURE REVIEW**

Technology has transformed global education by offering new learning opportunities and making teaching and learning more productive and meaningful. In this day and age, a number of initiatives have been taken for creating interactive teaching content with the use of interactive technology and H5P is one of them. H5P, a HTML5 package, provides numerous tools which enable teachers to make their web contents highly interactive. Peter Atherton says, “This diverse video platform enables basic editing of online videos and the sharing and the curating of creative, interactive content” (139). Besides, it helps create interesting and interactive content. According to Vinny Stocker, H5P is an open source project which allows creating interactive, responsive, HTML5 learning activities that we can use in a Moodle course, for instance; interactive video lessons, quizzes, course presentation, memory game, drag and drop and other interesting activities.

Stocker has also mentioned several benefits of using H5P on Moodle. Firstly, H5P enables the user to upgrade it anytime with new features even though it is completely free and an open-source program. Besides, it doesn't demand any technical knowledge or expertise from the users for creating the content and is highly compatible with Moodle and other interactive teaching platforms. By adding hotspot, passive learning experience is turned into an active learning experience. Furthermore, research findings by Lawson et al. established that by providing learners with guided questions and relevant information while viewing the clip improves students' performance.

By integrating H5P with Moodle which is widely used by the colleges of technology in Oman, teachers and instructional designers can enhance the learning experience of the students and make teacher-student and student-student interactions more effective and seamless. Referring to the advantages of this platform, Atherton said that the interactive videos of H5P can be used as part of a flipped classroom or as a one-to-one classroom activity. Perhaps the most interesting feature of H5P is the option of editing videos borrowed from YouTube and elsewhere with questions and other interactions. There are quite a few video based interactive teaching platforms like Edpuzzle and Tuition Kit. However, H5P is better customized and more user-friendly. In addition, it offers scores of interactive fun activities. The H5P interactive video content allows the users to add multiple choices, fill in the blank questions, pop-up explanatory text, image, tables and other types of interactions to the videos. More importantly, it provides the learners with the opportunity to self-learn and self-correct. These are deemed vitally important in modern pedagogical framework. Bjork et al. stated that learners are often unable to evaluate their understanding of a topic and hence sometimes overrate their level of comprehension. This is where H5P turns out to be a savior. If learners answer a question wrong, it will automatically retreat and make them watch the particular section of the video again. There are a few other benefits which are worth mentioning. H5P contents can be edited and embedded in Moodle and shared with others. Moreover, it allows teachers and instructors to track learners' progress and performance scores. A group of researchers from Victoria University, Australia conducted an extensive research on interactive teaching contents and shared the effectiveness of H5P by saying that H5P is “a suitable toolkit for the purpose of providing Blended Active Learning experiences”(543). The following screenshot shows the versatility of H5P content:

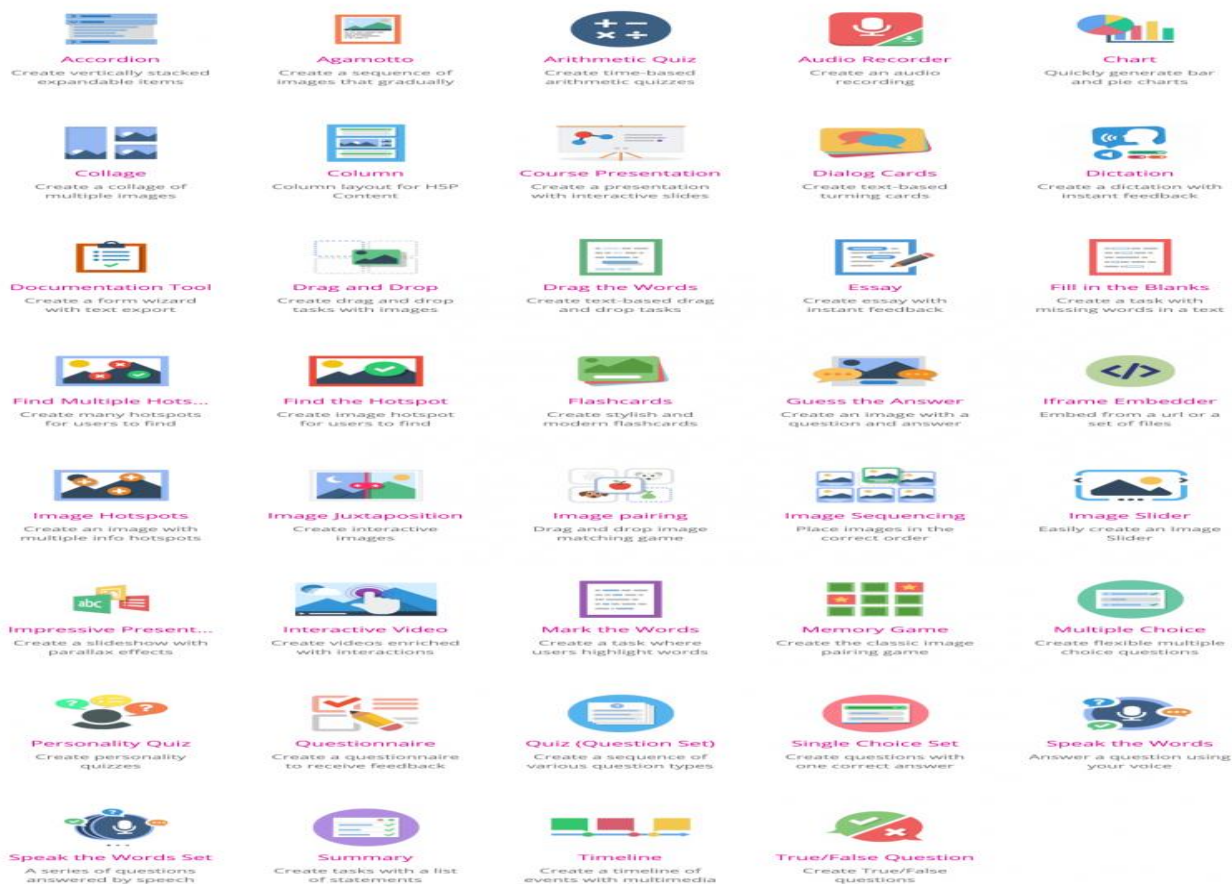


Figure1. Content Types and Applications on H5P

(Screenshot from <https://h5p.org/content-types-and-applications>)

III. THE TRAINING SESSION AND THE TEACHERS’ PERSPECTIVES

The English Language Centre of Ibra College of Technology conducted a hands-on training session entitled “**Creating Interactive Teaching Content Using Moodle and H5P**” on 9 July 2020. More than 60 teachers from various Colleges of Technology participated in the training session. A questionnaire was administered to collect their feedback after the training session. A total of 47 participants gave their feedback using the questionnaire.

Table 1. Question-wise Responses

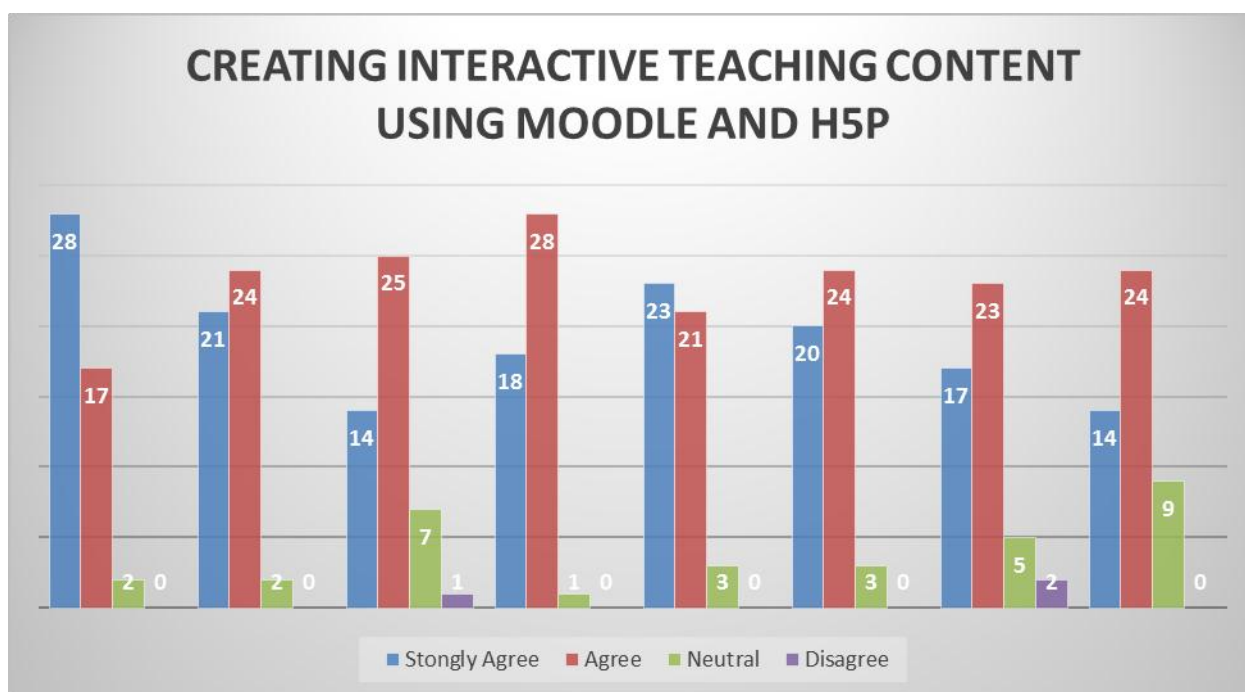
| “Creating Interactive Teaching Content Using Moodle and H5P”  | Strongly Agree | Agree | Neutral | Disagree | Total |
|---|----------------|-------|---------|----------|-------|
| 1. Do you think that H5P helps make rich interactive teaching content thanks its diverse features?              | 28             | 17    | 2       | 0        | 47    |
| 2. Do you think this free plugin makes integration with Moodle seamless?  | 21             | 24    | 2       | 0        | 47    |
| 3. Do you think it caters to most types of learning styles?   | 14             | 25    | 7       | 1        | 47    |
| 4. Do you think it helps promote students’ autonomy and self-learning opportunities at their own pace and time? | 18             | 28    | 1       | 0        | 47    |
| 5. Do you think H5P is better-customized and more user-friendly?  | 23             | 21    | 3       | 0        | 47    |

|   |       |       |      |      |     |
|---|-------|-------|------|------|-----|
| 6. Do you think H5P provides the students with opportunities to self-reflect and self-assess?                       | 20    | 24    | 3    | 0    | 47  |
| 7. Do you think H5P is an invaluable tool for teaching in general and language teaching in particular?              | 17    | 23    | 5    | 2    | 47  |
| 8. Where will you place the plugin(H5P) on a scale of 5 where 1 is the least effective and 5 is the most effective? | 14    | 24    | 9    | 0    | 47  |
| Total   | 155   | 186   | 32   | 3    | 376 |
| Percentage  | 41.22 | 49.47 | 8.51 | 0.80 | 100 |

**IV. THE FEEDBACK ANALYSIS**

The analysis of the feedback showed that:

Most respondents i.e. 45 respondents (95.74 %) affirmed that H5P helps make rich interactive teaching content, thanks to its diverse features. A good majority of them i.e. 28 respondents (59.57 %) strongly agreed to the statement and another 17 (36.17 %) respondents agreed to the statement.

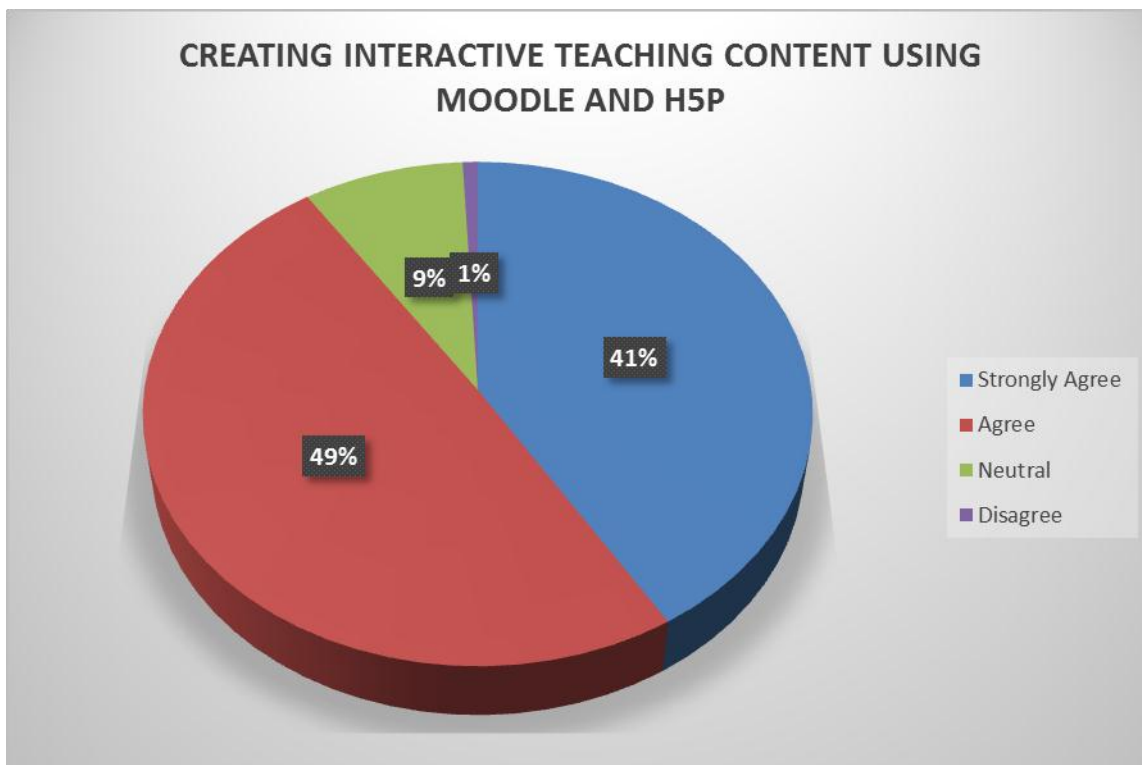


**Figure 2. Teachers' Question-wise Feedback**

An equal number of respondents as illustrated above either strongly agreed (24 respondents or 51.06 %) or agreed (21 respondents or 44.66 %) that this free plugin makes integration with Moodle seamless.

In the same vein, 39 (82.97%) respondents either strongly agreed or agreed that it caters to most types of learning styles. An overwhelming majority i.e. 46 out of 47 (97.87%) respondents think it helps promote students' autonomy and self-learning opportunities at their own pace and time.

Moreover, 44 respondents (93.61 %) opined that H5P is better-customized and more user-friendly and an equal number of respondents also think that H5P provides the students with opportunities to self-reflect and self-assess. While 40 respondents (85.10 %) expressed that H5P is an invaluable tool for teaching in general and language teaching in particular, as many as 38 respondents (80.85 %) placed the H5P plugin on 4 and above on a scale of 5, where 1 is the least effective and 5 is the most effective.



**Figure 3. Overall Feedback**

The results of the feedback categorically reaffirm the assumptions of the researchers as 43 out of 47 i.e. 90% respondents are overwhelmingly positive about the efficacy of Moodle and H5P for creating interactive teaching content.

**V. LIMITATIONS OF THE STUDY**

The study was conducted for the teachers who work in the colleges of technology in Oman. Hence, the feedback is limited to those teachers. Secondly, this study was conducted with a view to testing the efficacy of H5P from the teachers’ perspective. By design, it leaves out the perspective of the students.

**VI. SUGGESTIONS FOR FURTHER RESEARCH**

1. Moodle and H5P have a lot to offer other than the teaching aids mentioned in this study. Therefore, a detailed study with the feedback of both the students and teachers would be very useful and relevant.
2. The challenges faced by both the teachers and students while using Moodle and H5P would certainly merit the critical attention of the researchers.
3. Gamification has garnered significant attention in the world of teaching in the recent past. Therefore, H5P needs to be examined from the point of view of Gamification.
4. Collaborative Writing is a major field of study and researchers might probe how Moodle, H5P and similar online platforms could help conduct engaging collaborative writing classes.
5. Network issues are often encountered by quite a few students. Keeping this in mind, a collaborative research could be initiated to make these tasks available offline.

**VII. CONCLUSION**

All things considered, H5P is indeed a remarkable free online tool that helps make interactive teaching content. The fact that it integrates seamlessly with online platforms like Moodle, Blackboard and Wordpress makes it even more endearing. The teachers’ feedback adds more vitality to the research findings of the research team. Therefore, it is evidently clear that using them together will help teachers overcome many of the hardships imposed on them by online teaching.

## VIII. REFERENCE

- [1]. Atherton, Peter. "50 Ways to Use Technology Enhanced Learning in the Classroom." *Google*, Google, 15 Jan 2018, [books.google.com/books?id=wbZBDwAAQBAJ](https://books.google.com/books?id=wbZBDwAAQBAJ).
- [2]. Bjork, R. A., Dunlosky, J., & Kornell, N. "Self-Regulated Learning: Beliefs, Techniques, and Illusions". *Annual Review of Psychology*, vol. 64, 2013, pp. 417-444.
- [3]. "Cool Tools: H5P - The Free Interactive Content Authoring Tool." *Monarch Media, Inc. Santa Cruz, CA*, 16 Mar. 2019, [www.monarchmedia.com/cool-tools-h5p-the-free-interactive-content-authoring-tool/](http://www.monarchmedia.com/cool-tools-h5p-the-free-interactive-content-authoring-tool/).
- [4]. "Create, Share And Reuse Interactive HTML5 Content In Your Browser." *H5P, 2020*, [h5p.org/](http://h5p.org/).
- [5]. Lawson, Timothy J. et al. "Guiding Questions Enhance Student Learning from Educational Videos". *Teaching of Psychology*, vol. 33, 2006, pp. 31-33.
- [6]. Magnussen, Magnus Vik. "H5P: An Open Source HTML5 ELearning Authoring Tool." *ELearning Industry*, 12 Oct. 2017, [elearningindustry.com/h5p-an-open-source-html5-elearning-authoring-tool](http://elearningindustry.com/h5p-an-open-source-html5-elearning-authoring-tool).
- [7]. "Moodle Plugins Directory: Interactive Content – H5P." *Moodle.org*, 2020, [moodle.org/plugins/mod\\_hvp](http://moodle.org/plugins/mod_hvp).
- [8]. Patel, Deep. "5 Differences between Marketing to Millennials Vs. Gen Z." *Forbes, Forbes Magazine*, 27 Nov. 2017, [www.forbes.com/sites/deepatell/2017/11/27/5-differences-between-marketing-to-millennials-vs-gen-z/](http://www.forbes.com/sites/deepatell/2017/11/27/5-differences-between-marketing-to-millennials-vs-gen-z/).
- [9]. Stocker, Vinny, et al. "H5P and Moodle." *Pukunui*, 4 Mar. 2020, [pukunui.com/h5p-and-moodle/](http://pukunui.com/h5p-and-moodle/).
- [10]. Twenge, Jean M. "*iGen: Why Today's Super-Connected Kids Are Growing up Less Rebellious, More Tolerant, Less Happy and Completely Unprepared for Adulthood and What That Means for the Rest of Us*". Atria Books, 2017.
- [11]. Wilkie, Sonia, et al. "Considerations for Designing H5P Online Interactive Activities". *ASCILITE*, 2018, pp. 543-549.