Differentiation of Student Perceptions for Online Courses, Over Time

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Abstract. This paper presents the main findings of a study exploring graduate student perceptions of online education, with a specific focus on their change over time, throughout an asynchronous web-based course. The study was conducted in the UK, and data collection methods included content analysis of online messages and interviews. Data analysis was based on systematically contrasting participant early- (at the beginning of the course) and late- (by the end of the course) course perceptions. Several inconsistencies were identified between early- and late- course perceptions, which were categorized according to three emerging themes: managerial, social and cognitive. The findings indicate negative perception change with respect to the managerial and social aspects, whereas positive change was evident in terms of the cognitive aspect. The implications drawn from the study are expected to inform and support the design and implementation of web-based courses.

Keywords: Case studies · Qualitative methods · Educational technology · Attitudes and beliefs · E-learning/online learning · Computer-assisted learning

1 Introduction

Despite its rapid expansion [1], online education is relatively young; research on the impact of online learning is growing but still inconclusive [2]. We argue that a prominent step towards the effective designing and implementation of web-based courses, is the exploration of online students' perceptions, agreeing with other researchers in the field [3].

Several perception themes are identified in existing studies on online environments but they are largely characterized by inconsistencies and controversies [2, 4, 5]. One of the most standard themes refers to the logistical, technical and time demands of a web-based course. Flexibility of time and place is certainly reported as an appealing feature by students [6], although many students find that e-learning is unduly time-demanding, requiring great dedication and commitment [7, 8]. Other issues students phase include overwhelming feelings due to information overload and lack of computer or Internet knowledge [9, 10].

A key perception theme highlighted in the literature is also online interaction [11]. Many students favor the traditional face-to-face context over the online one, mainly due to prompt peer feedback and non-verbal social cues [12]. Nonetheless, evidence of

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positive perceptions about online interaction is also reported in the literature with some students finding that peer feedback is more constructive and discussions are more insightfully developed, due to the opportunity for reflection, provided by the asynchronous format [13, 14]. Moreover, frustration is common among students when guidance and feedback from the tutor is not immediate, regular, unambiguous and constructive [15]. As with peer interaction, many feel that tutor interaction is rather limited online, when others claim that developing a relationship with him/her is easier since anxiety, often encountered in a face-to-face meeting, is not an issue [16].

In terms of performance, students appear to believe that they could achieve the same grades online as in the traditional classroom, and research evidence corroborate that [17–19]. However, satisfaction with and perceptions of the overall learning experience varies among online students. This diversity is sometimes a result of the learning independency required online, which does not suit all learners. Studies shows that self-motivated and self-directed students tend to share positive experiences. Yet, those who feel more comfortable in a structured and closely guided context, expecting to acquire knowledge directly from the tutor without great engagement on their part, share negative experiences [20].

A broad range of facilitative digital tools and a plethora of information sources are additional features widely appreciated by students who find online learning creative and diversified [21]. For some, diversified learning is also achieved through exchanging ideas and evaluating peer responses and methodologies in the approach of specific topics, which is encouraged in an online 'community of inquiry' [13].

Although the literature indicates that perceptions and experiences of web-based education vary, little effort has been made to differentiate between perceptions before and after enrolling an online course. Yet, since perceptions are strong predictors of practice, pre-course attitude may affect the course outcome. In fact, understanding both student perceptions before or at the beginning of the course and by the end or after the course is essential in pointing out key aspects. In view of the limited research in the area, we explored the differentiation of student perceptions of web-based education over time.

2 Methodology

A case study of a 3-month graduate asynchronous online course offered by a UK higher education institute, was conducted. The course was offered through the 'Blackboard' management system, as part of a Master's program in educational technology. Students were expected to weekly contribute to the online discussion and accomplish activities assigned by the tutor. The sample was composed of all 15 participants. Providing basic demographic information about the sample, it is mentioned that 10 participants were female and 5 male, the majority of them (6) fell within the 30–35 age range, four were between 25–30 years old, 2 between 35–40 and 2 between 40–45 years old. Also, 5 of them were full time students while the other 10 were part-time students. 8 of them were foreign, non-native English speakers, with the other 7 being native English speakers. Finally, 6 of them had previous online learning experiences whereas for the other 9, this was their first online course.

A first stage involved collection of students' messages on the discussion board. Expectations or statements of belief in the early messages were classified as early-course perceptions. Late messages, where participants contrasted their experience with initial expectations, were classified as late-course perceptions. In the second stage, semi-structured interviews with seven participants were undertaken immediately after the completion of the course to collect students' post-course perceptions, which would be grouped with the late-course perceptions identified in the online messages. Data were analysed qualitatively, using content and thematic analyses. Three perception themes emerged: managerial, social and cognitive. Systematic contrast of early- and late-course perceptions was then followed to identify change throughout the course.

3 Results

According to the findings, negative perception change was identified with respect to the managerial and social aspects, whereas positive change was evident in terms of the cognitive aspect. Inconsistencies in attitudes were inevitable; not all students experienced the same affordances and constraints. Nonetheless, negative change in managerial perceptions was significant across the sample. Almost all students shared positive perceptions about the time, effort and skill demands of the course, at the time of enrolling. Characteristically a student posted: "One of the reasons I chose this course is that I like the fact that I can be signing in on a beach in the Caribbean.", while another reported during the post-course interview: "I was hoping that the distant format would fit with my busy schedule and was not disappointed.".

Nevertheless, by the end of the course, the majority of them demonstrated a negative attitude. Factors that appeared to influence this outcome included previous online experience, technology knowledge, discussion layout, platform facility and content load. A student mentioned during the post-course interview: "My initial expectation was that it would be much easier. I naively thought that it would be easier, perhaps in terms of time I spent doing it, and so, you know, I would kick it off nice and quickly; unfortunately that turned out not to be the case". Near the end of the course, another student posted: "I am worried about the speed of discussions. It takes a while to read all the postings, and sometimes it seems that everything has been said. It is a bit difficult remembering every point though. I felt more comfortable during the first weeks when we only had one task to complete and not multiple as in lately."

Implications are there for pre-course training which would familiarize students with the course requirements and study protocol but also address any unrealistic expectations. Moreover, we argue that a moderator assistant, who would attend to students' technical difficulties with the platform, would increase their confidence, but also enable the tutor to focus more on ensuring that content and discussions are presented and archived efficiently so as to prevent information overload. Finally, it is important that he assigns frequent activity deadlines monitoring student progress and helping them stay on schedule.

Inconsistencies among students' experiences with respect to the social aspect, were also identified. Some students favoured the 'anonymity' and informal communication usually established in an online environment. For example one wrote in a late message:

"Developing arguments online gave me a sense of anonymity which in turn gave me confidence and made it easier to participate and interact". Another who mentioned in an early message that they are "shy when among strangers and that's a concern" when they "get to meet new people in a new course", later on posted: "If this course was occurring in a face-to-face context I would probably just hear what other people have to say and even if I wanted to engage or interact I wouldn't. I'm so glad this did not prove to be the case here […] I was much more vocal than what I thought I would be."

Yet, noticeable negative change was evident for most participants. Even though they entered the course holding positive perceptions about the quality and level of interaction with peers and tutor, this changed. For them, lack of immediacy/intimacy proved a major disadvantage. Characteristically, a student posted in a late message: "I was concerned a bit; I think it is more difficult for people to work and interact with each other in this way. I was always wondering if people who read my postings understood my point or something totally different; since I couldn't see others I could never be sure about that and that meant problematic interaction". Another message, from a different student, echoing feelings of isolation was: "I was completely alone, did not know anyone. I eagerly waited for the next course to start to have some social contacts. I even counted the days […] And actually it got even worse". More specifically with regards to the student-tutor relationship, several students were not satisfied, requiring a more 'vocal' tutor presence. Others desired more 'personalized' responses, as the following quote from a post-course interview reveals: "Sometimes his replies were not very 'on to the point' and this was maybe because he tried to address all students' concerns in one message. It was like giving feedback to a group of postings instead of my own and this did not encourage interaction with him".

Many suggested the addition of face-to-face meetings or synchronous sessions to the asynchronous format: "Mixed mode please! Much better than taking only one mode, in terms of collaboration, student-teacher interaction, students interaction. And if face-to-face is not feasible then maybe use synchronous discussion on Blackboard" (Post-course interview quote). We would agree that this is a good practice for overcoming student anxiety and enhancing participants' sense of belongingness in the community. Moreover, in agreement with recent studies, establishing a protocol for communication from the beginning may be essential in regulating expectations encouraging mutual understanding. The tutor's presence is key; not only he needs to encourage social interaction among peers, but he should also be involved in the process. Many students acknowledged that the tutor's role is different online than onsite, yet they still expected him to be an active member. Consistent feedback is important, and, as the results of the study suggest, tutors should aim at replying with personal messages and not generic postings.

Interestingly, negative perceptions of social interaction were not found to largely impact upon students' cognitive perceptions of the course. In fact, the positive attitude change towards the online experience is highly promising about the pedagogical potential of e-learning. Major cognitive benefits according to the participants, included opportunities for sharing information and resources, methodically reflecting on own and peer responses, and gradually developing skills for self-directed learning. Evidently a student reported during the post-course interview: "I did feel I learn from others, yes! When I joined the course I didn't know anything about computer-mediated

communication, but since I entered the discussions on related topics, read many colleagues' ideas, followed their reading references, it made me learn a lot. I also saved a lot of time from trying to find and learn all those theories. I wasn't alone in trying to sort out things. That was the first time I worked in a collaborative way, it required effort but it was my first experience and I was very satisfied. I really liked that way of learning." Furthermore, an online message from a student reflected satisfaction due to a sense of learning autonomy: "In this new type of learning, what's important is not only the knowledge you obtain but the method of obtaining it. In this sense the learner is taking over responsibilities for his/her own learning".

These possibilities should be considered by designers and tutors, in an attempt to improve educational experiences. Especially in view of self-directed learning, albeit an arduous process, many students seem to be motivated by the opportunity to control their learning pace and paths. Research should capitalize on new theoretical and practical frameworks for autonomous learning online.

Negative change in cognitive perceptions was also noted, however, with problematic group collaboration distressing some students, as the following post-course interview quote suggests: "People were stating their opinions about things and these were relevant to the topic in general, but did not address the main points. I think things get a bit loose and out of the track also because of the text-based format. There's no one to interrupt your thoughts and get you back on track. That's why I cannot say my online experience was as productive as I'd like." Others discussed the low learning curve they experienced throughout the course: "I haven't attended any other similar courses before, so I had no great expectations or opinions for online learning. I was open-minded and just hoped to make the most of it. I found (online) learning difficult. Yes, you can work at your own pace, but you need to keep finding incentives to keep you going and not stay behind. It's very easy to lose motivation and you cannot see the learning curve, it is developed very slowly. Call me 'old head' but you need to be able to 'see' what you're learning. I'm not sure if I acquired any factual knowledge here. No one explained things to me. It was just me reading stuff." (Late message).

It is essential that students' learning styles and personal characteristics are considered before group assignment. As seen, students complained about unstructured/unfocused discussions and they felt that the discussion was often incoherent, with no specific target, but, to a great extent, this was attributed to the tutor's minimal involvement: "It seems to me that tutor's participation is not as frequent and apparent as in face-to-face. He assigns the activity but leaves participants to respond according to their own conceptualization of the activity, while in a face-to-face situation he often guides the discussion. Perhaps this is why I sometimes felt the discussion was not focused on the topic.". Online tutors are generally expected to facilitate rather than lead, but this should not result in underestimating their role. Finally, negative cognitive perceptions were articulated by a student with dyslexia who struggled throughout: "I did find learning really difficult as well because I am dyslexic and I will always have my own issues regarding learning and writing stuff down. I did find that really difficult also because I'm quite slow in reading so it took me a lot of time to go through everything. I was very nervous about writing stuff down because I knew that everybody was ok with spelling, grammar and stuff." This issue certainly places the emphasis on

the design of courses which would address learning disabilities like dyslexia and meet the imperative for inclusion and diversity in online higher education.

4 Conclusion and Discussion

Decades after the introduction of online courses, researchers are still trying to evaluate the impact of online education. Our study attempted to contribute to these efforts through the exploration of change in students' perceptions throughout a web-based course. Some of the perceptions presented above contribute to knowledge by corroborating evidence reported in other studies [22].

The added value of this study, though, is highlighted by the fact that it reviews how these perceptions differentiated over time and what implications are there for the design and implementation of web-based courses. It appears that consideration needs to be given on how online and conventional sessions can be effectively blended to establish an optimized educational environment. Moreover, our findings overall seem to suggest that the focus is placed on the development of metacognitive strategies, for supporting students to overcome obstacles and sustain an effective learning experience throughout their course.

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