

### Background

- A digital badge is a digital entity that represents ability in a certain skillset.
- Digital badges may present an opportunity to enhance learning in the pharmacy curriculum while also fulfilling the need for co-curricular activity.

### Objectives

- Identify student perceptions of the value of pursuing digital badges.
- Identify student motivating factors, both intrinsic and extrinsic, for pursuing a digital badge.
- Identify student concerns and challenges for participating in a digital badging program.

### Methods

- A Qualtrics survey was sent to P1s, P2s and P3s with three email reminders over one month.
- Demographic information was obtained.
- Students were asked to identify perceived values, motivating factors, and challenges associated with digital badging using a five point Likert scale.
- The overall likelihood of pursuing a digital badge was queried, including asking the reasons for their selection of likelihood.
- Descriptive statistics and other appropriate statistical tests performed.

### Results

Total of 116 usable responses. (48.9% response rate)

Table 2 Level of Agreement with the Perceived Value of a Digital Badge

Statement	Strongly Disagree (%)	Disagree (%)	Neither Agree nor Disagree (%)	Agree (%)	Strongly Agree (%)	Mean (SD)	Median	
Value for Recognition							3.58 (0.68)	3.5
Badges are useful for credentialing acquired skills	0 (0)	8 (6.9)	37 (31.9)	64 (55.2)	7 (6)	3.60 (0.71)	4	
Badges are best suited for recognizing student accomplishments	1 (0.9)	15 (12.9)	29 (25)	60 (51.7)	11 (9.5)	3.56 (0.87)	4	
Value as Motivator for Participation							3.49 (0.60)	3.67
If participation in digital badging is required by the school, then digital badging has value	2 (1.7)	20 (17.2)	23 (19.8)	62 (53.4)	9 (7.8)	3.48 (0.93)	4	
If participation in digital badging is optional, then digital badging has value	2 (1.7)	21 (18.1)	24 (28.4)	43 (46.6)	6 (5.2)	3.35 (0.90)	4	
Badges enhance motivation for participation in co-curricular activities	0 (0)	11 (9.5)	30 (25.9)	64 (55.2)	11 (9.5)	3.65 (0.78)	4	
Value for Learning							3.54 (0.64)	3.75
Badges enhance feedback on performance	0 (0)	14 (12.1)	37 (31.9)	57 (49.1)	8 (6.9)	3.51 (0.80)	4	
Badges enhance motivation for learning	1 (0.9)	14 (12.1)	32 (27.6)	61 (52.6)	8 (6.9)	3.53 (0.82)	4	
Badges are best suited as incentives for learning	1 (0.9)	16 (13.8)	32 (27.6)	57 (49.1)	10 (8.6)	3.51 (0.87)	4	
Badges recognize informal learning	1 (0.9)	8 (6.9)	30 (25.9)	70 (60.3)	7 (6)	3.64 (0.74)	4	

Five-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Table 3 Level of Agreement with Factors Affecting Decision to Pursue a Digital Badge

Statement	Strongly Disagree (%)	Disagree (%)	Neither Agree nor Disagree (%)	Agree (%)	Strongly Agree (%)	Mean (SD)	Median	
Intrinsic Motivators							3.78 (0.66)	4
To pursue learning experiences that are of interest to me	0 (0)	7 (6)	16 (13.8)	74 (63.8)	19 (16.4)	3.91 (0.73)	4	
To assist in my professional development	1 (0.9)	5 (4.3)	21 (18.1)	60 (51.7)	29 (25)	3.96 (0.83)	4	
To receive better feedback on your performance	3 (2.6)	12 (10.3)	28 (24.1)	62 (53.4)	11 (9.5)	3.57 (0.90)	4	
To experience learning that I wouldn't achieve in the classroom	2 (1.2)	9 (7.8)	28 (24.1)	62 (53.4)	15 (12.9)	3.68 (0.86)	4	
To enhance my skill achievement	1 (0.6)	7 (4.1)	25 (21.6)	68 (58.6)	15 (12.9)	3.77 (0.78)	4	
Extrinsic Motivators							3.65 (0.63)	3.83
If I'm able to publish an achievement on social media	12 (10.3)	27 (23.3)	33 (28.4)	36 (31)	8 (6.9)	3.01 (1.12)	3	
To make me competitive for a job	2 (1.7)	5 (4.3)	18 (15.5)	53 (45.7)	38 (32.8)	4.03 (0.90)	4	
To document participation in a co-curricular activity	1 (0.9)	10 (8.6)	25 (21.6)	66 (56.9)	14 (12.1)	3.71 (0.82)	4	
To document mastery of learning skills	1 (0.9)	6 (5.2)	26 (22.4)	69 (59.5)	14 (12.1)	3.77 (0.76)	4	
To increase my engagement in co-curricular activities	2 (1.7)	12 (10.3)	32 (27.6)	66 (56.9)	4 (3.4)	3.50 (0.80)	4	
To learn skills that transfer to the workplace	2 (1.7)	5 (4.3)	20 (17.2)	66 (56.9)	23 (19.8)	3.89 (0.83)	4	

Five-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Table 4 Level of Agreement with Challenges to Pursue a Digital Badge

Challenges	Very Unlikely (%)	Unlikely (%)	Neutral (%)	Likely (%)	Very Likely (%)	Mean (SD)	Median
Time Requirement	0 (0)	3 (2.6)	15 (12.9)	59 (50.9)	39 (33.6)	4.16 (0.74)	4
Work Load	0 (0)	5 (4.3)	13 (11.2)	56 (48.3)	42 (24.7)	4.16 (0.79)	4
Rigor	1 (0.9)	11 (9.5)	23 (19.8)	57 (49.1)	24 (20.7)	3.79 (0.91)	4
Lack of Course Credit	5 (4.3)	13 (11.2)	34 (29.3)	47 (40.5)	17 (14.7)	3.50 (1.02)	4
Cost	0 (0)	5 (4.3)	22 (19)	49 (42.2)	40 (34.5)	4.07 (0.84)	4
Validity of the Program	1 (0.9)	6 (5.2)	21 (18.1)	54 (46.6)	34 (29.3)	3.98 (0.88)	4
Valid Assessment	1 (0.9)	7 (6.0)	23 (19.8)	58 (50)	27 (23.3)	3.89 (0.86)	4

Five-point Likert scale: 1 = very unlikely, 2 = unlikely, 3 = neutral, 4 = likely, 5 = very likely

### Discussion

- Students generally recognize value for all categories of perceived value .
- If students recognize value they are more likely to pursue a digital badge.
- Perceived value also correlated with motivating factors.
- All the extrinsic and intrinsic motivators influenced decision to pursue a digital badge.
- Using ordinal logistic regression model it appears that extrinsic factors are more important than intrinsic factors in predicting likelihood to pursue a digital badge.
- All challenges were identified as factors affecting decision to pursue a digital badge.
- Limitations:
  - Lack of robustness of education provided about digital badging.
  - Only examined students' perceptions.

### Conclusion

Provides insights for determining best practices for designing a digital badge as a form of micro-credentialing. Further research and evaluation of an implemented digital badge is necessary for ultimately defining best practices in digital badging.

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